

START

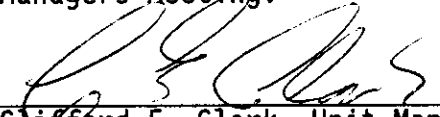
0031508

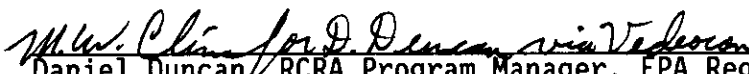
Meeting Minutes Transmittal

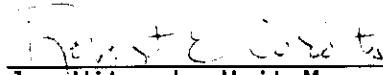
GROUT TREATMENT FACILITY Unit Managers Meeting Ecology Office, Kennewick, Washington

February 18, 1993
9:00 a.m. - 10:00 a.m.

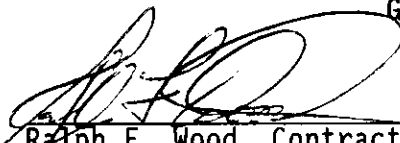
The undersigned indicate by their signatures that these meeting minutes reflect the actual occurrences of the above dated Unit Managers Meeting.


Clifford E. Clark, Unit Manager, RL Date: 10/4/93


Daniel Duncan, RCRA Program Manager, EPA Region 10 Date: 5/12/93


Joe Witczak, Unit Manager, Washington State Department of Ecology Date: 12/12/95

Grout, WHC Concurrence


Ralph F. Wood, Contractor Representative, WHC Date: 5/12/93

Purpose: Discuss Permitting Process

Meeting Minutes are attached. The minutes are comprised of the following:

- Attachment 1 - Agenda
- Attachment 2 - Summary of Discussion and Commitments/Agreements
- Attachment 3 - Attendance List
- Attachment 4 - Action Items
- Attachment 5 - Engineering Change Notices
- Attachment 6 - Clarification of RCRA Hazardous Waste Testing Requirements for Mixed Waste
- Attachment 7 - Grout Facilities Milestone M-01-00

001 1993

0031508

Attachment 1

**GROUT TREATMENT FACILITY
Unit Managers Meeting
Ecology Office, Kennewick, Washington**

**February 18, 1993
9:00 a.m. - 10:00 a.m.**

Agenda

1. PREVIOUS MEETING MINUTES
2. PROGRAM STATUS
 - Status of Vault Construction
 - Engineering Change Notices (B-714-163, -164, -165, -166, -167)
3. RCRA TOPICS
 - Permit Application Status
4. GENERAL TOPICS
 - Action Items
 - Past Action Items
 - New Action Items
 - Schedule Next Meeting Date
 - Tentative Dates
 - Proposed Topics

10:00 a.m. - 12:00 p.m. TCLP Issues

- TCLP Procedure 10.3.1 (Feed Characterization Issues)
- TCLP Sample Size

Attachment 2

GROUT TREATMENT FACILITY
Unit Managers Meeting
Ecology Office, Kennewick, Washington

February 18, 1993
9:00 a.m. - 10:00 a.m.

Summary of Discussion and Commitments/Agreements

1. PREVIOUS MEETING MINUTES -

- No meeting minutes were available for distribution.

2. PROGRAM STATUS -

- The construction of Vault B-714 was completed the end of December 1992, with the exception of punch list items. Site cleanup, stabilization gravel, and cathodic protection acceptance test procedure has been completed. Construction on W-125 has been deferred, consistent with Ecology/RL agreement.
- A summary of Engineering Change Notices B-714-163, -164, -165, -166 and -167 was given by Mr. T. Staehr (WHC) (Attachment 5).
- A presentation on Clarification of RCRA Hazardous Waste Testing Requirements for Mixed Waste was given (Attachment 6). Working procedures on testing protocols, capacity study, and tank waste remediation system re-baseline will identify future schedules. The performance assessment has slipped from March 1993 to June 1993, which will impact the October 1993 startup.
- Following the program status, Mr. B. Cordts of Ecology initiated a question and answer discussion. Mr. Cordts inquired about the stabilization that will be used on the soil above the Grout feed line, and was informed it will be gravel. Mr. Cordts then asked when WHC will complete installation of leachate pumps, and WHC indicated it is in the process of procurement at the present time. Mr. Cordts inquired about the schedule for vaults on testing procedures, and was informed that equipment and installation of testing procedures is in development now and will be complete for operational readiness review (in services testing and critique plan). Closing out the discussion, Mr. Cordts asked about the schedule for the first campaign, and was informed that it is still on schedule.

3. RCRA TOPICS -

- Mr. B. Cordts confirmed that Ecology is preparing a request for relocation of the groundwater wells to be installed.

2025-02-18 10:00 AM

4. GENERAL TOPICS -

- There were three new action items for February 1993 (Attachment 4).
- The next meeting was scheduled for March 17, 1993, at 740 Stevens Center in Richland.

TCLP ISSUES -

- A discussion ensued with Mr. Bruce Wood (EPA) via telecon. Spike and acid preservation were discussed, and Mr. Wood expressed concern that spiking after preservation may not be indicative of methods used. Mr. Wood further stated that Mr. Barry Lesnik may offer alternatives. Mr. Wood stated that he is aware of the problems, but does not agree that reversing steps for spiking is acceptable. Mr. Wood indicated that sample size position is acceptable to EPA due to radiation exposure concerns.

Attachment 3

**GROUT TREATMENT FACILITY
Unit Managers Meeting
Ecology Office, Kennewick, Washington**

**February 18, 1993
9:00 a.m. - 10:00 a.m.**

Attendance List

Name	Organization	Phone
Cliff Clark	RL	(509) 376-9993
Mike Cline	WHC	(509) 376-7957
Bob Cordts	Ecology	(206) 459-6863
Dan Duncan	EPA	(206) 553-6693
Paul Hammitt	WHC	(509) 373-4203
Lori Huffman	RL	(509) 376-0104
Steve Lijek	MACTEC	(509) 376-0309
Tom Staehr	WHC	(509) 372-3013
John Van Beek	WHC	(509) 372-2813
Bill Winters	WHC	(509) 373-1951
Ralph Wood	WHC	(509) 373-4731
Bruce Woods	EPA	(206) 553-1193

49-60316

Attachment 4

GROUT TREATMENT FACILITY
Unit Managers Meeting
Ecology Office, Kennewick, Washington

February 18, 1993
9:00 a.m. - 10:00 a.m.

Action Items

<u>Action Item</u>	<u>Description</u>
12-08-92:4	WHC will obtain a copy of excavation drawings for W-125 and CQA plans. ACTION: R. Wood CLOSED (2/18/93).
01-13-93:1	EPA will look at arranging a technical meeting regarding issue paper and methods. ACTION: D. Duncan OPEN
01-13-93:2	WHC will provide issue paper on sample size. ACTION: B. Winters OPEN
02-18-93:1	EPA will have a position for the March UMM regarding alternatives for spike and acid preservation. ACTION: D. Duncan and B. Lesnik
02-18-93:2	WHC will look at running a few Grout samples both ways if material is available (i.e. grouted material). To be considered are feasibility, cost and schedule.
02-18-93:3	RL will formally transmit an issue paper and request determination on sample size and spike recovery.

Attachment 5

GROUT TREATMENT FACILITY
Unit Managers Meeting
Ecology Office, Kennewick, Washington

February 18, 1993
9:00 a.m. - 10:00 a.m.

ENGINEERING CHANGE NOTICES

99-03-16

#10
2-18-93
G. J. T.

GROUT UNIT MANAGERS MEETING ECN STATUS 2-18-93

ECN B714-163 Improved the design of the vault pit drain seal assemblies

ECN B714-164 1) As-built electrical drawings to show 1" rather than 3/4" conduit and location of ground conductor to annunciator

2) Specified revised requirements for conduit identification tags

3) Included the installation of transformer demand meter, socket test switch and current transformers in the contractor work scope

4) Revised requirement for storage of rectifier cabling

ECN B714-165 1) As-built location of excess water piping

2) Revised material call out for pit plug handles

3) Increased tolerance for location of nozzle identification numbers

4) Updated and revised material requirements for drain seal assemblies

ECN B714-166 1) Revised cathodic protection requirements to allow for testing before hot-tie in of piping is made

2) As-built test station locations

ECN B714-167 1) Voided civil run-on control drawings, replaced with drawing H-2-77595

2) Voided Instrumentation P&ID's, which will be provided by Portable Instrument House contractor

29 FEB 1993

ENGINEERING CHANGE NOTICE

Page 1 of 31. ECN ~~185462~~Proj.
ECN B-714-163

2. ECN Category (mark one) Supplemental <input type="checkbox"/> Direct Revision <input checked="" type="checkbox"/> Change ECN <input type="checkbox"/> Temporary <input type="checkbox"/> Standby <input type="checkbox"/> Supersedeure <input type="checkbox"/> Cancel/Void <input type="checkbox"/>		3. Originator's Name, Organization, MSIN, and Telephone No. M.A. McLean, KEH, E6-42, 6-5529		4. Date 12-08-92	
		5. Project Title/No./Work Order No. Grouted Waste Disposal Facilities B-714/ER8007		6. Bldg./Sys./Fac. No. 218-E-16	
		8. Document Numbers Changed by this ECN (includes sheet no. and rev.) See Block 12		9. Related ECN No(s). B-714-102 & -119	
				7. Impact Level 3Q/SC-2	
				10. Related PO No. N/A	
11a. Modification Work <input type="checkbox"/> Yes (fill out Blk. 11b) <input checked="" type="checkbox"/> No (NA Blks. 11b, 11c, 11d)		11b. Work Package No. N/A		11c. Modification Work Complete N/A	
		Cog. Engineer Signature & Date		Cog. Engineer Signature & Date	
12. Description of Change Block 8: H-2-77608, Sh 1, Rev 2 H-2-78478, Sh 1, Rev 2 Block 13b (Justification Details) continued: New O-Ring seal design facilitates machining and assembly of parts while maintaining adequate seal. Clarification of painting requirements will improve fabrication process. and material description may be 10-92 THE CHANGES MADE TO SAFETY CLASS 2 ITEMS IMPROVE THE DESIGN OF THE ORIGINAL FACILITY DESIGN (Ref Calc No. B-714-104).				APPROVED FOR PUBLIC RELEASE 2/10/93 N. Solis SC-2 & SC-3 as noted on design drawings.	
***** SEE PAGE 3 FOR DESCRIPTION OF CHANGES *****					
13a. Justification (mark one) Criteria Change <input type="checkbox"/> As-Found <input type="checkbox"/>		Design Improvement <input checked="" type="checkbox"/> Facilitate Const. <input type="checkbox"/> Const. Error/Omission <input type="checkbox"/>		Environmental <input type="checkbox"/> Design Error/Omission <input type="checkbox"/>	
13b. Justification Details Design changes to lifting handle/bail improve human factor operation and allows for misalignment between the pit floor drains and cover block sleeves without impacting the function and operation of the Drain Seal Assembly. JUSTIFICATION DETAILS CONTINUED IN BLOCK 12 ABOVE.					
14. Distribution (include name, MSIN, and no. of copies) KEH DISTRIBUTION Const Doc Cntl E2-50 WHC DISTRIBUTION Project Files R1-28 R. E. Clayton S1-54 M. W. Cline H6-24				CAUSE CODE ⑫ RELEASE STAMP OFFICIAL RELEASE BY WHC DATE DEC 29 1992 Sta #10	
				J. K. Epperley R1-29 R. K. Sanan [4] R4-05 J. E. Shapley N1-83 T. W. Staehr (PE) R3-27 J. E. Vanbeek R3-27 G. H. Weissberg R3-10 DOE/A. G. Lassila A5-10 STA #6 TA-03	

B-714-163

1) H-2-77608, Sh 1, Rev 2

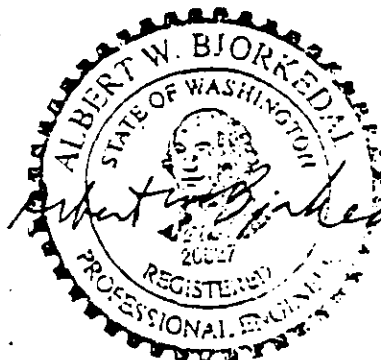
- A) Incorporate ECN B-714-102 and B-714-119 where applicable to the new design.
- B) Generally revise the drawing to show new drain seal assembly design as described in Block 13b of this ECN. Affects ECN B-714-102, Item 4 and ECN B-714-119, Item 2.
- C) In the Title Block, change total sheets to read " 1 of 2 " and change revision number to " 3 ".

2) Add new Sheet 2, Rev 0 to drawing number H-2-77608.

3) H-2-78478, Sh 1, Rev 2

- A) Incorporate ECN B-714-102 and B-714-119 where applicable to the new design.
- B) Generally revise the drawing to show new drain seal assembly design as described in Block 13b of this ECN. Affects ECN B-714-102, Item 8 and ECN B-714-119, Item 5.
- C) In the Title Block, change total sheets to read " 1 of 2 " and change revision number to " 3 ".

4) Add new Sheet 2, Rev 0 to drawing number H-2-78478.



EXPIRES 9/18/79

ENGINEERING CHANGE NOTICE

Page 1 of 51. ECN 185461Proj.
ECN B-714-164

2. ECN Category (mark one) Supplemental <input checked="" type="checkbox"/> Direct Revision <input type="checkbox"/> Change ECN <input type="checkbox"/> Temporary <input type="checkbox"/> Standby <input type="checkbox"/> Supersature <input type="checkbox"/> Cancel/Void <input type="checkbox"/>		3. Originator's Name, Organization, MSIN, and Telephone No. A.R. Snowwhite, KEH, E6-42, 6-0324		4. Date 12-04-92	
		5. Project Title/No./Work Order No. Grouted Waste Disposal Facilities B-714/ER8007		6. Bldg./Sys./Fac. No. 218-E-16	
		8. Document Numbers Changed by this ECN (Includes sheet no. and rev.) See Block 12		9. Related ECN No(s). B-714-115	
				7. Impact Level Q3/SC-2	
				10. Related PO No. N/A	
11a. Modification Work [] Yes (fill out Blk. 11b) [X] No (NA Blks. 11b, 11c, 11d)		11b. Work Package No. N/A		11c. Modification Work Complete N/A	
		11d. Restored to Original Condition (Temp. or Standby ECN only) N/A			
		Cog. Engineer Signature & Date		Cog. Engineer Signature & Date	
12. Description of Change Block 8: Drawings H-2-77639, Sh 1, Rev 2 H-2-77640, Sh 1, Rev 1 H-2-77639, Sh 2, Rev 2 H-2-78504, Sh 1, Rev 1 Specification B-714-C2, Rev 1 (V-B714C2-003) Block 13b (Justification Details) continued: (AF-Item 4): Space within rectifier was not sufficient to stow coiled output cables. (DI-Item 6): Circular metal conduit identification tags for use on small diameter conduit and on PVC coated conduit will insure conduit identification in lieu of black paint & stencil which would not withstand weathering & would be difficult to apply on small diameter conduits. (FC-Item 5): WHC Utilities group requested the construction contractor to install Vault Transformer demand meter, socket, test switch and CT's. SEE SUCCEEDING PAGES FOR DESCRIPTION OF CHANGES					
13a. Justification Criteria Change (mark one) As-Found [X] Facilitate Const. [X] Design Improvement [X] Environmental [X] Const. Error/Omission [X] Design Error/Omission [X]					
13b. Justification Details (CE-Item 1 & 2): Contractor installed 1" conduit rather than 3/4". THIS SC-2 CHANGE HAS NO AFFECT ON THE ORIGINAL DESIGN REQUIREMENTS & IS ACCEPTABLE FOR THIS APPLICATION. (DE-Item 3): Drawing did not indicate the connection of existing duct bank ground conductor to the annunciator. THIS SC-2 CHANGE IS AN IMPROVEMENT TO THE ORIGINAL DESIGN. ***JUSTIFICATION DETAILS CONTINUED IN BLOCK 12 ABOVE.***					
14. Distribution (include name, MSIN, and no. of copies) KEH DISTRIBUTION Const Doc Cntl E2-50 WHC DISTRIBUTION Project Files R1-28 R. E. Clayton S1-54 M. W. Cline H6-24 STA. 6 T2-03 STA. 10 A3-87 A-7900-013-2 (06/92) GEF095					
EDC J. K. Epperley R1-29 R. K. Sanan [4] R4-05 J. E. Shapley N1-83 T. W. Staehr (PE) R3-27 J. E. Vanbeek R3-27 G. H. Weissberg R3-10 DOE/A. G. Lassila A5-10 Lupe Garza 46-76					
RELEASE STAMP OFFICIAL RELEASE BY WHC DATE DEC 11 1992 4					

15. Design Verification Required [X] Yes [] No		16. Cost Impact ENGINEERING Additional <input checked="" type="checkbox"/> \$ 1460 Savings [] \$ CONSTRUCTION Additional <input checked="" type="checkbox"/> \$ 2000 ² Savings [] \$		17. Schedule Impact (days) Improvement [] N/A Delay []	
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18. Change Impact Review: Indicate the related documents (other than the engineering documents identified on Side 1) that will be affected by the change described in Block 12. Enter the affected document number in Block 19.

SDD/DD	[]	Seismic/Stress Analysis	[]	Tank Calibration Manual	[]
Functional Design Criteria	[]	Stress/Design Report	[]	Health Physics Procedure	[]
Operating Specification	[]	Interface Control Drawing	[]	Spares Multiple Unit Listing	[]
Criticality Specification	[]	Calibration Procedure	[]	Test Procedures/Specification	[]
Conceptual Design Report	[]	Installation Procedure	[]	Component Index	[]
Equipment Spec.	[]	Maintenance Procedure	[]	ASME Coded Item	[]
Const. Spec.	[]	Engineering Procedure	[]	Human Factor Consideration	[]
Procurement Spec.	[]	Operating Instruction	[]	Computer Software	[]
Vendor Information	[]	Operating Procedure	[]	Electric Circuit Schedule	[]
OM Manual	[]	Operational Safety Requirement	[]	ICRS Procedure	[]
FSAR/SAR	[]	IEFD Drawing	[]	Process Control Manual/Plan	[]
Safety Equipment List	[]	Cell Arrangement Drawing	[]	Process Flow Chart	[]
Radiation Work Permit	[]	Essential Material Specification	[]	Purchase Requisition	[]
Environmental Impact Statement	[]	Fac. Proc. Samp. Schedule	[]		[]
Environmental Report	[]	Inspection Plan	[]		[]
Environmental Permit	[]	Inventory Adjustment Request	[]		[]

19. Other Affected Documents: (NOTE: Documents listed below will not be revised by this ECN.) Signatures below indicate that the signing organization has been notified of other affected documents listed below.

Document Number/Revision	Document Number/Revision	Document Number/Revision
--------------------------	--------------------------	--------------------------

20. Approvals

Signature	Date	Signature	Date
OPERATIONS AND ENGINEERING		ARCHITECT-ENGINEER	
Cog Engineer <i>[Signature]</i>	12/9/92	PE <i>[Signature]</i>	12/9/92
Cog. Mgr. <i>[Signature]</i>	12/9/92	QA <i>B.R. Fillion</i>	12-8-92
QA <i>[Signature]</i>	12/10/92	Safety <i>[Signature]</i>	12-8-92
Safety		Design-ELEC: <i>[Signature]</i>	12-7-92
Security		Envir. <i>[Signature]</i>	12-7-92
Environ.		Other-SPECS <i>[Signature]</i>	12-7-92
Projects/Programs		PLE: <i>[Signature]</i>	12-7-92
Tank Waste Remediation System		COA: <i>[Signature]</i>	12-7-92
Facilities Operations		DEPARTMENT OF ENERGY	
Restoration & Remediation		Signature or Letter No.	
Operations & Support Services			
IRM		ADDITIONAL	
Other			

- 1) H-2-77639, Sh 1, Rev 2
Elevation J, Front View: Modify - see page 4 of this ECN.
- 2) H-2-77639, Sh 2, Rev 2
Elevation K, Front View: Modify - see page 4 of this ECN.
- 3) H-2-77640, Sh 1, Rev 1 (Affects ECN B-714-115, page 14)
Elevation Front View: Modify - see page 5 of this ECN.
- 4) H-2-78504, Sh 1, Rev 1
Change Note 17 to read as follows:

17. PROVIDE APPROXIMATELY 20 FEET OF COILED INPUT CONDUCTORS INSIDE RECTIFIER INSTRUMENT ENCLOSURE AND APPROXIMATELY 20 FEET OF COILED OUTPUT CONDUCTORS IN TRENCH BELOW CONDUIT SLEEVE. COVER COILED OUTPUT CONDUCTORS WITH WOOD BOARD.

- 5) Specification B-714-C2, Rev 1, SECTION 16300
Para 3.2.4.5; change to read as follows:

3.2.4.5 Install demand meter, socket, test switch and current transformers.

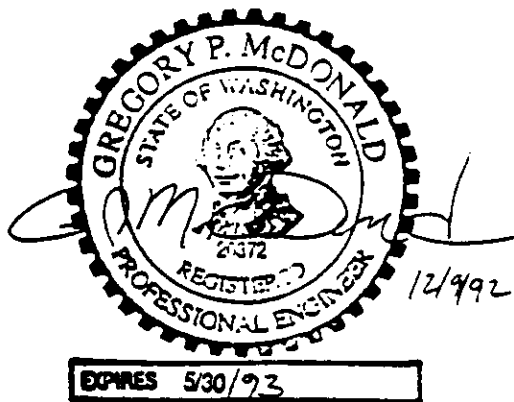
- 6) Specification B-714-C2, Rev 1, SECTION 16400
A) Add new para 2.1.15 as follows:

2.1.15 Conduit identification tag: Circular stainless steel with stainless steel attachment wire.

B) Para 3.2.3.4; change to read as follows:

3.2.3.4 Labeling: Permanently label each conduit, at both ends where practicable, with number shown on the Drawings. Use black paint and stencil, or use circular stainless steel tag embossed or stamped with conduit number. Attach tag to conduit with stainless steel wire. Place stenciled number in manholes approximately 1/2 inch above point of conduit entry into manhole.

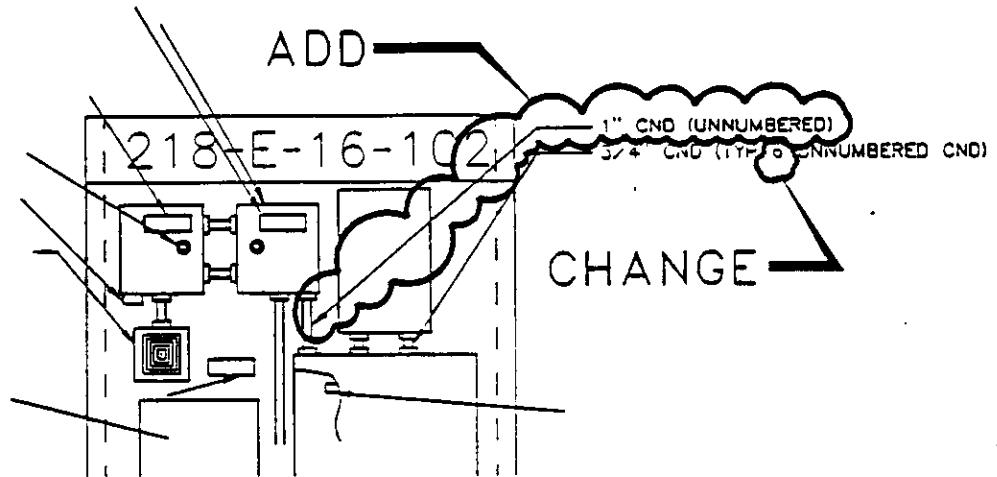
REGISTERED ENGINEER REVIEW
ELEC - All items



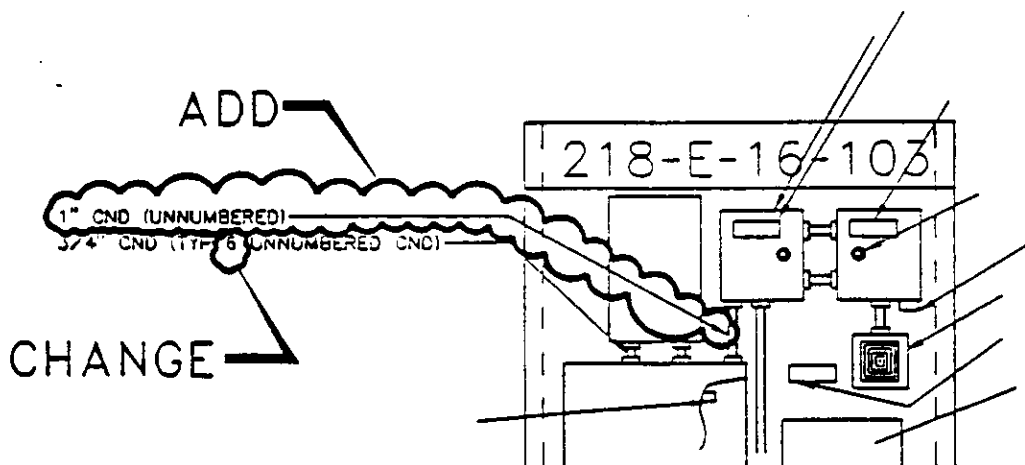
KAISER ENGINEERS
HANFORD

ENGINEERING CHANGE NOTICE SKETCH

Ref. Dwg.	Sh.	Rev.	Prepared By	Checked By	ECN No.	Page
H-2-77639	1	2	TE COYNE	<i>H.R. [Signature]</i>	B-714-164	4/5
H-2-77639	2	2				



REF DWG H-2-77639 SH 1



REF DWG H-2-77639 SH 2

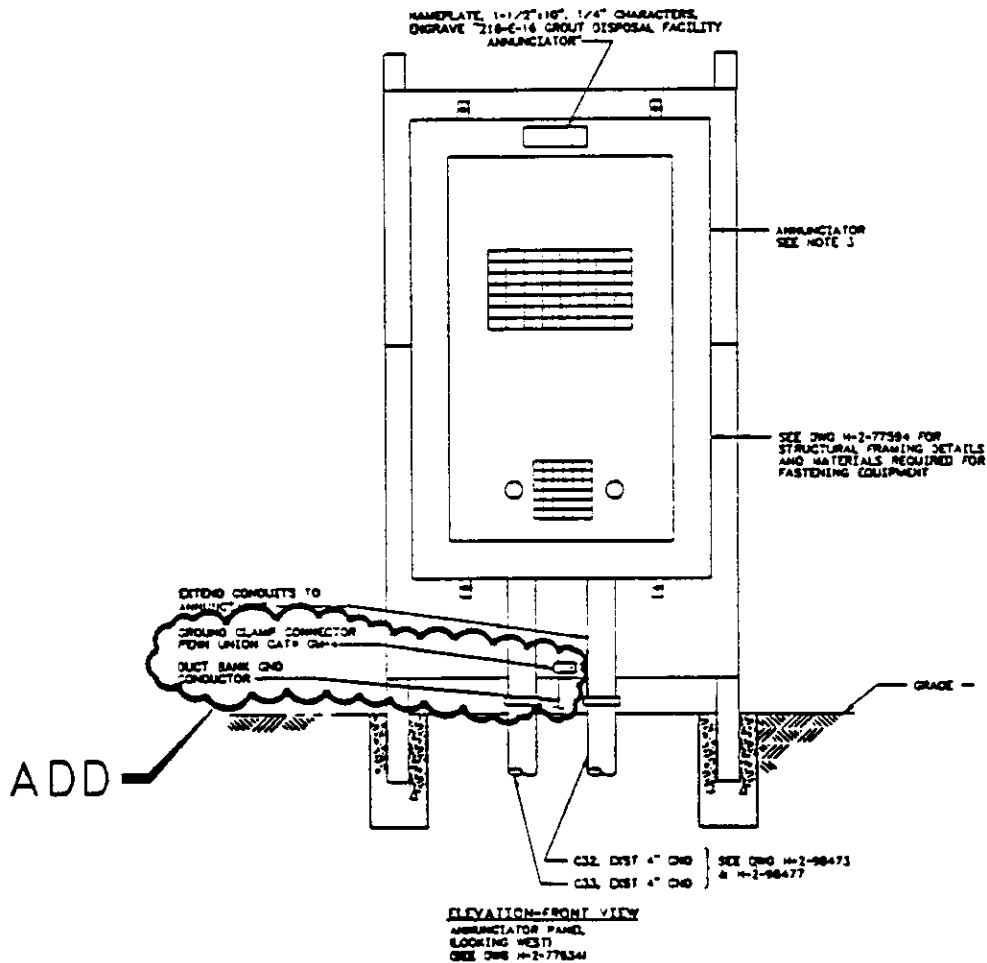
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9313043.1624

KAISER ENGINEERS
HANFORD

ENGINEERING CHANGE NOTICE SKETCH

Ref. Des. H-2-77640	Sh. 1	Rev. 1	Prepared By TE COYNE	Checked By <i>A. P. Smith</i>	ECN No. B-714-164	Page 5/5
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*** Affects ECN B-714-115, page 14



9313043.1625

ENGINEERING CHANGE NOTICE

Page 1 of 9

1. ECN ~~188777~~Proj.
ECN B-714-165

2. ECN Category (mark one) Supplemental <input checked="" type="checkbox"/> Direct Revision <input type="checkbox"/> Change ECN <input type="checkbox"/> Temporary <input type="checkbox"/> Standby <input type="checkbox"/> Supersedeure <input type="checkbox"/> Cancel/Void <input type="checkbox"/>	3. Originator's Name, Organization, MSIN, and Telephone No. M. A. McLean, KEH, E6-42, 6-5529		4. Date 12/08/92
	5. Project Title/No./Work Order No. GROUTED WASTE DISPOSAL FACILITIES B-714/ER8007	6. Bldg./Sys./Fac. No. 218-E-16	7. Impact Level 3Q/SC-2
	8. Document Numbers Changed by this ECN (includes sheet no. and rev.) SEE BLOCK 12	9. Related ECN No(s). SEE BLOCK 12	10. Related PO No. N/A
	11a. Modification Work [] Yes (fill out Blk. 11b) [X] No (NA Blks. 11b, 11c, 11d)	11b. Work Package No. N/A	11c. Modification Work Complete N/A Cog. Engineer Signature & Date

12. Description of Change

BLOCK 8: Drawings

H-2-77596, Sh 1, Rev 1
H-2-77609, Sh 1, Rev 2
H-2-77610, Sh 1, Rev 2
H-2-78480, Sh 1, Rev 1

Specification B-714-C2, Rev 1, (V-B714C2-003)

BLOCK 9: ECN No. B-714-78
B-714-91
B-714-117

SC-3: Items 2, 3, & 4

SC-2: Items 1, 5, & 6

APPROVED FOR
PUBLIC RELEASE

2/10/93 N. Solis

DESCRIPTION OF CHANGES ON SUCCEEDING PAGES

13a. Justification (mark one)	Criteria Change []	Design Improvement [X]	Environmental []
As-Found []	Facilitate Const. [X]	Const. Error/Omission [X]	Design Error/Omission []

13b. Justification Details

(CE-Item 1): Pipe line was installed in relation to the as-constructed location of the 26" riser in the Leachate Pit per the disposition of NCR B-714-099. This change documents the As-Constructed West Coordinate of line 2"EW-102A and 2"EW-103A.

JUSTIFICATION DETAILS CONTINUED ON PAGE 3

CAUSE CODE ⑪

14. Distribution (include name, MSIN, and no. of copies)

KEH DISTRIBUTION

Const Doc Cntl E2-50

J. K. Epperley R1-29
R. K. Sanan [4] R4-05
J. E. Shapley N1-83
T. W. Staehr (PE) R3-27
J. E. Vanbeek R3-27
G. H. Weissberg R3-10
DOE/A. G. Lassila A5-10

WHC DISTRIBUTION

Project Files R1-28
R. E. Clayton S1-54
M. W. Cline H6-24

STA. 6 T2-03

STA. 10 A3-87

Lupe Garza 46-76

RELEASE STAMP

OFFICIAL RELEASE
BY WHC

DATE DEC 17 1992

Sta. 4

ENGINEERING CHANGE NOTICE

Page 2 of 9

1. ECN (use no. from pg. 1)

B-714-165

15. Design Verification Required

☒ Yes
☐ No

16. Cost Impact

ENGINEERING

CONSTRUCTION

 Additional ☒ \$2550.
 Savings ☐ \$

 Additional ☐ \$0.
 Savings ☐ \$

17. Schedule Impact (days)

NONE

 Improvement ☐
 Delay ☐

18. Change Impact Review: Indicate the related documents (other than the engineering documents identified on Side 1) that will be affected by the change described in Block 12. Enter the affected document number in Block 19.

SOD/DO	<input type="checkbox"/>	Seismic/Stress Analysis	<input type="checkbox"/>	Tank Calibration Manual	<input type="checkbox"/>
Functional Design Criteria	<input type="checkbox"/>	Stress/Design Report	<input type="checkbox"/>	Health Physics Procedure	<input type="checkbox"/>
Operating Specification	<input type="checkbox"/>	Interface Control Drawing	<input type="checkbox"/>	Spares Multiple Unit Listing	<input type="checkbox"/>
Criticality Specification	<input type="checkbox"/>	Calibration Procedure	<input type="checkbox"/>	Test Procedures/Specification	<input type="checkbox"/>
Conceptual Design Report	<input type="checkbox"/>	Installation Procedure	<input type="checkbox"/>	Component Index	<input type="checkbox"/>
Equipment Spec.	<input type="checkbox"/>	Maintenance Procedure	<input type="checkbox"/>	ASME Coded Item	<input type="checkbox"/>
Const. Spec.	<input type="checkbox"/>	Engineering Procedure	<input type="checkbox"/>	Human Factor Consideration	<input type="checkbox"/>
Procurement Spec.	<input type="checkbox"/>	Operating Instruction	<input type="checkbox"/>	Computer Software	<input type="checkbox"/>
Vendor Information	<input type="checkbox"/>	Operating Procedure	<input type="checkbox"/>	Electric Circuit Schedule	<input type="checkbox"/>
OM Manual	<input type="checkbox"/>	Operational Safety Requirement	<input type="checkbox"/>	ICRS Procedure	<input type="checkbox"/>
FSAR/SAR	<input type="checkbox"/>	IEFD Drawing	<input type="checkbox"/>	Process Control Manual/Plan	<input type="checkbox"/>
Safety Equipment List	<input type="checkbox"/>	Cell Arrangement Drawing	<input type="checkbox"/>	Process Flow Chart	<input type="checkbox"/>
Radiation Work Permit	<input type="checkbox"/>	Essential Material Specification	<input type="checkbox"/>	Purchase Requisition	<input type="checkbox"/>
Environmental Impact Statement	<input type="checkbox"/>	Fac. Proc. Samp. Schedule	<input type="checkbox"/>		<input type="checkbox"/>
Environmental Report	<input type="checkbox"/>	Inspection Plan	<input type="checkbox"/>		<input type="checkbox"/>
Environmental Permit	<input type="checkbox"/>	Inventory Adjustment Request	<input type="checkbox"/>		<input type="checkbox"/>

19. Other Affected Documents: (NOTE: Documents listed below will not be revised by this ECN.) Signatures below indicate that the signing organization has been notified of other affected documents listed below.

Document Number/Revision

Document Number/Revision

Document Number Revision

20. Approvals

OPERATIONS AND ENGINEERING

Cog./Project Engineer

Signature

Date

Cog./Project Engr. Mgr.

QA

Safety

Security

Proj. Prog./Dept. Mgr.

Def. React. Div.

Chem. Proc. Div.

Def. Wst. Mgmt. Div.

Adv. React. Dev. Div.

Proj. Dept.

Environ. Div.

IRM Dept.

Facility Rep. (Ops.)

Other

Signature

Date

ARCHITECT-ENGINEER

PE

QA

Safety

Design - Piping

Other - Enviro

PLE

COA

SPECS:

DEPARTMENT OF ENERGY

ADDITIONAL

22913403.1627

Justification Details Cont.

(FC-Item 2): Contractor states that designated grade of material is not available. This change allows use of a material grade which is available that is equal to or better than the designated grade regarding strength, ductility and weldability for the application of this material.

(DI-Items 3 & 4): This change allows Nozzle identification numbers to be painted on a flat surface (pitwall) and not overlap anchor plates, and to be visible above vertical nozzles.

(DI-Items 5 & 6): (Reference ECN B-714-163) These specification changes are required to implement the design improvement to the drain seal assembly drawings. Drain seal assembly materials, fabrication and inspection are per Section 05500 of Spec B-714-C2, Rev 1. Item 5 modifies the CGI listing to incorporate SC-2 components. Items 6A, C, D, E, & F list new products and ASTM Standards. Items 6B, G, & H establish new requirements for carbon to stainless steel welding.

THE CHANGES (Items 5 & 6) MADE TO SAFETY CLASS 2 ITEMS, PROVIDE SPECIFICATION REQUIREMENTS FOR THE COMPONENTS USED TO IMPROVE THE ORIGINAL FACILITY DESIGN AS REFERENCED IN ECN B-714-163

THE CHANGE (Item 1) MADE TO SAFETY CLASS 2 PIPING DOES NOT IMPACT THE INTEGRITY OF THE ORIGINAL FACILITY DESIGN.

Description of Changes1) H-2-77596, Sh 1, Rev 1

Plan (Z D4): Change the West Coordinate call out for lines 2"EW-102A & 2"EW-103A from "W45468.00 TYP" to "W45468.00-102A/W45468.24-103A".

2) H-2-77609, Sh 1, Rev 2

Parts List (Z F1): Add "OR GR 1018" to the Material Reference for Part Number 9.

3) H-2-77610, Sh 1, Rev 2

Pit Isometric (Z B3): change " 4" MAX" dimension to " 10" MAX".

4) H-2-78480, Sh 1, Rev 1

Pit Isometric (Z B3): Change " 4" MAX" dimension to " 10" MAX".

5) SPECIFICATION B-714-C2, Rev 1, Section 01400

APPENDIX A Commercial Grade Items Listing (Affects ECN B-714-78, Item 2A)

- A) In SPEC/DWG REF 05500, 2.1.8, add the CGI as shown on page 6 of this ECN.
- B) In SPEC/DWG REF 05500, 2.1.13, add the CGI as shown on page 7 of this ECN.
- C) In SPEC/DWG REF 05500, add new CGI 2.1.16 as shown on page 8 of this ECN.
- D) In SPEC/DWG REF 05500, add new CGI 2.1.17 as shown on page 9 of this ECN.

- E) SPEC/DWG REF B-714-C2, 15493: Delete all data corresponding to the O-RING CGI including references H-2-77608, Sh 1 and H-2-78478, Sh 1.
- F) SPEC/DWG REF B-714-C2, 15493: For the GASKET CGI, delete the reference to H-2-77608, Sh 1, and H-2-78478, Sh 1.

6) SPECIFICATION B-714-C2, Rev 1, Section 05500

A) Paragraph 1.1.1.2: Add the following:

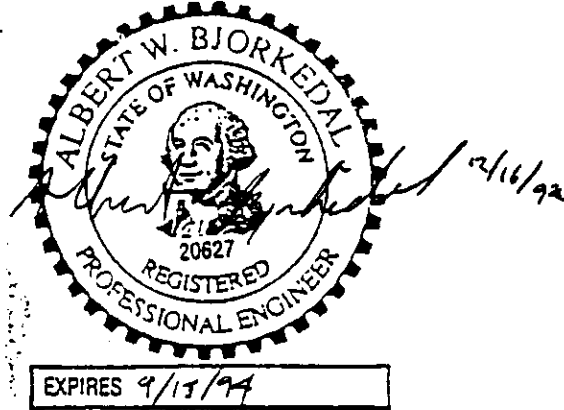
A 276-91a Standard Specification for Stainless and Heat-Resisting Steel Bars and Shapes.

A 325-91c Standard Specification for Structural Bolts, Steel, Heat Treated, 120/105 ksi Minimum Tensile Strength.

- B) Paragraph 1.2.4 (Affects ECN B-714-91, Item 3A): Change the wording "drain seal assemblies" to read as "drain seal assembly welds indicated on the drawings with **".
- C) Add the following to the end of Paragraph 2.1.8:
Use ASTM A325, Type 1 as shown on drain seal assembly drawings.
- D) Add the following to the end of Paragraph 2.1.13.1:
Except where shown on drain seal assembly drawings use Garlock Bluegard Style 3200.
- E) Add new paragraph:
2.1.16 Stainless Steel Bars and Shapes: ASTM A276, Grade 304L.
- F) Add new paragraph:
2.1.17 O-RING: Ethylene Propylene. Parker Seals #2-318.
- G) Paragraph 2.2.1.3 (Affects ECN B-714-117, Item 1A):
Modify to read as "Perform welding (except for carbon to stainless steel welding and stainless to stainless welding) in accordance with ...".
- H) Add new paragraph:
2.2.1.5 Perform carbon to stainless steel welding and stainless to stainless welding in accordance with ASME Section IX and approved welding procedures.
- I) Add new paragraph:
3.1.4 All bolts in the cover block drain seal assembly flange shall be torqued to 104 foot pounds prior to operations start-up.

629134031629

REGISTERED ENGINEER REVIEW - PIPING ONLY



9313043.1630

SPEC/DWG REF	ITEM DESCRIPTION	ACCEPTABLE VALUE, CONDITION OR TOLERANCE	METHOD OF VERIFICATION	SAMPLE SIZE
2.1.8	Bolts, ASTM A 325 TYPE 1	1. For bolts greater than 3 diameters in length: Minimum ultimate tensile strength of 120,000 psi. 2. Dimensions in accordance with ANSI B18.2.1 and ANSI B1.1	1. Perform a tensile and hardness test in accordance with ASTM A 370 Appendix A3 2. Visual, Scale	1 Bolt of each size per 100 received 1 Bolt of each size per 100 received

五

13-14-92

SPEC/DWG REF	ITEM DESCRIPTION	ACCEPTABLE VALUE, CONDITION OR TOLERANCE	METHOD OF VERIFICATION	SAMPLE SIZE
2.1.16	Stainless Steel Bars and Shapes ASTM A 276 Grade 304L	<ol style="list-style-type: none">1. Minimum yield strength of 25,000 psi.2. Chemical composition in accordance with ASTM A 276, Grade 304L3. Dimensions in accordance with ASTM A 484	<ol style="list-style-type: none">1. Perform a tensile test in accordance with ASTM A 3702. Perform a chemical analysis in accordance with ASTM A 7513. Visual, scale	<ol style="list-style-type: none">1 sample per heat of material1 sample per heat of material1 sample per product size

SPEC/DWG REF	ITEM DESCRIPTION	ACCEPTABLE VALUE, CONDITION OR TOLERANCE	METHOD OF VERIFICATION	SAMPLE SIZE
2.1.17	O-Ring	1. Identification: Manufacturer, Parker Seals, Part #2-318.	1. Visual: Manufacturer's catalog number on shipping container or item.	100%
		2. ASTM Line Call Out No. ASTM D 2000 M2 AA 810 A13 EA14 F17.	2. Visual: ASTM Line call out No. traceable to item.	100%
		3. Hardness: 80 \pm 5 points.	3. Per ASTM D 1414, perform durometer test per ASTM D 1415.	100%
		4. Material: Ethylene Propylene.	4. Visual: Manufacturer's catalog number or material description on shipping container.	100%
		5. Dimensions: Inside diameter of .0975 in \pm .010 Width of .210 in \pm .005.	5. Measure inside diameter and width with caliper.	100%

ENGINEERING CHANGE NOTICE

Page 1 of 61. ECN ~~490651~~Proj.
ECN B-714-166

2. ECN Category (mark one) Supplemental <input checked="" type="checkbox"/> Direct Revision <input type="checkbox"/> Change ECN <input type="checkbox"/> Temporary <input type="checkbox"/> Standby <input type="checkbox"/> Supersedure <input type="checkbox"/> Cancel/Void <input type="checkbox"/>	3. Originator's Name, Organization, MSIN, and Telephone No. A. R. Snowwhite, KEH, E6-42, 6-0324		4. Date 12-11-92
	5. Project Title/No./Work Order No. GROUTED WASTE DISPOSAL FACILITIES B-714/ER8007	6. Bldg./Sys./Fac. No. 218-E-16	7. Impact Level 3Q /SC-2
	8. Document Numbers Changed by this ECN (includes sheet no. and rev.) SEE BLOCK 12	9. Related ECN No(s). NONE	10. Related PO No. N/A
11a. Modification Work [] Yes (fill out Blk. 11b) [X] No (NA Blks. 11b, 11c, 11d)	11b. Work Package No. N/A	11c. Modification Work Complete N/A Cog. Engineer Signature & Date	11d. Restored to Original Condition (Temp. or Standby ECN only) N/A Cog. Engineer Signature & Date

12. Description of Change

Block 8: Drawings H-2-77645, Sh 1, Rev 2
 H-2-77646, Sh 1, Rev 1
 H-2-78511, Sh 1, Rev 2

ATP No. WHC-SD-B714-ATP-001, Rev 1

SC-3

 SEE SUCCEEDING PAGES FOR DESCRIPTION OF CHANGES

APPROVED FOR
 PUBLIC RELEASE

2/10/93 N. Jolis

13a. Justification (mark one)	Criteria Change []	Design Improvement []	Environmental []
As-Found [X]	Facilitate Const. []	Const. Error/Omission []	Design Error/Omission []

13b. Justification Details

(Item 1A, 1B, 2, 4): Change required since final connections to GPF piping have not yet been completed.

(Item 1C, & 3): Test station coordinates updated to "as-constructed" survey data.

CAUSE CODE (10)

14. Distribution (include name, MSIN, and no. of copies)

KEH DISTRIBUTION	J. K. Epperley	R1-28
Const Doc Cntl	E2-50	R. K. Sanan [4]
	J. E. Shapley	N1-83
WHC DISTRIBUTION	T. W. Staehr (PE)	R3-27
Project Files	R1-28	J. E. Vanbeek
R. E. Clayton	S1-54	G. H. Weissberg
M. W. Cline	NO-24	DOE/A. G. Lassila
THIS ECN ONLY:	STA. 6	T2-03

RELEASE STAMP

OFFICIAL RELEASE

DATE

DEC 17 1992

KEH: A. D. Hjellum E6-50 WHC: K. Walter H5-26
 A-7900-013-2 (06/92) GEF095

STA. 10 A3-87
 Auria McNeil L8-04

9313013.135

ENGINEERING CHANGE NOTICE

Page 2 of 6

1. ECN (use no. from pg. 1)

8-714-166

15. Design Verification Required

☐ Yes☒ No

16. Cost Impact

ENGINEERING

Additional

☒\$ 949⁰⁰

Additional

☒\$ 3000⁰⁰

Savings

☐

\$

Savings

☐

\$

CONSTRUCTION

17. Schedule Impact (days)

N/A

Improvement

☐

Delay

☐

18. Change Impact Review: Indicate the related documents (other than the engineering documents identified on Side 1) that will be affected by the change described in Block 12. Enter the affected document number in Block 19.

SDD/DD	<input type="checkbox"/>	Seismic/Stress Analysis	<input type="checkbox"/>	Tank Calibration Manual	<input type="checkbox"/>
Functional Design Criteria	<input type="checkbox"/>	Stress/Design Report	<input type="checkbox"/>	Health Physics Procedure	<input type="checkbox"/>
Operating Specification	<input type="checkbox"/>	Interface Control Drawing	<input type="checkbox"/>	Spares Multiple Unit Listing	<input type="checkbox"/>
Criticality Specification	<input type="checkbox"/>	Calibration Procedure	<input type="checkbox"/>	Test Procedures/Specification	<input type="checkbox"/>
Conceptual Design Report	<input type="checkbox"/>	Installation Procedure	<input type="checkbox"/>	Component Index	<input type="checkbox"/>
Equipment Spec.	<input type="checkbox"/>	Maintenance Procedure	<input type="checkbox"/>	ASME Coded Item	<input type="checkbox"/>
Const. Spec.	<input type="checkbox"/>	Engineering Procedure	<input type="checkbox"/>	Human Factor Consideration	<input type="checkbox"/>
Procurement Spec.	<input type="checkbox"/>	Operating Instruction	<input type="checkbox"/>	Computer Software	<input type="checkbox"/>
Vendor Information	<input type="checkbox"/>	Operating Procedure	<input type="checkbox"/>	Electric Circuit Schedule	<input type="checkbox"/>
OM Manual	<input type="checkbox"/>	Operational Safety Requirement	<input type="checkbox"/>	ICRS Procedure	<input type="checkbox"/>
FSAR/SAR	<input type="checkbox"/>	IEFD Drawing	<input type="checkbox"/>	Process Control Manual/Plan	<input type="checkbox"/>
Safety Equipment List	<input type="checkbox"/>	Cell Arrangement Drawing	<input type="checkbox"/>	Process Flow Chart	<input type="checkbox"/>
Radiation Work Permit	<input type="checkbox"/>	Essential Material Specification	<input type="checkbox"/>	Purchase Requisition	<input type="checkbox"/>
Environmental Impact Statement	<input type="checkbox"/>	Fac. Proc. Samp. Schedule	<input type="checkbox"/>		<input type="checkbox"/>
Environmental Report	<input type="checkbox"/>	Inspection Plan	<input type="checkbox"/>		<input type="checkbox"/>
Environmental Permit	<input type="checkbox"/>	Inventory Adjustment Request	<input type="checkbox"/>		<input type="checkbox"/>

19. Other Affected Documents: (NOTE: Documents listed below will not be revised by this ECN.) Signatures below indicate that the signing organization has been notified of other affected documents listed below.

Document Number/Revision

Document Number/Revision

Document Number/Revision

20. Approvals

Signature	Date	Signature	Date
OPERATIONS AND ENGINEERING		ARCHITECT-ENGINEER	
Cog./Project Engineer	<u>12/15/92</u>	PE <u>C. B.</u>	<u>12/14/92</u>
Cog./Project Engr. Mgr.	<u>12/15/92</u>	QA <u>B.R. Fillion</u>	<u>12-11-92</u>
QA <u>99</u>	<u>12-15-92</u>	Safety <u>D. Luadoren</u>	<u>12-11-92</u>
Safety		Design - Elec: <u>A. R. Brown</u>	<u>12-11-92</u>
Security		Environ <u>R. H. Allen</u>	<u>12-11-92</u>
Proj. Prog./Dept. Mgr.		Other - PLE: <u>A. R. Brown</u>	<u>12-11-92</u>
Def. React. Div.		COA: <u>Sharon A. Allen</u>	<u>12-11-92</u>
Chem. Proc. Div.			
Def. Wst. Mgmt. Div.		DEPARTMENT OF ENERGY	
Adv. React. Dev. Div.			
Proj. Dept.			
Environ. Div.		ADDITIONAL	
IRM Dept.			
Facility Rep. (Ops.)			
Other			

1) H-2-77645, Sh 1, Rev 2

- A) Plan (Z D6): Modify - see page 4 of this ECN.
 B) Conn. Diag. (Z B5): Modify - see page 5 of this ECN.
 C) Test Sta. Table (Z A7); Change test station coordinates as follows:

NUMBER	FROM	TO
T (45-26)	W45740	W45747
T (45-27)	N40446, W45650	N40439, W45638
T (45-28)	N40446	N40440

(NOTE TO AS-BUILT: Pictorially relocate indicated test stations on the Plan (Z C4, C5, C6) to coordinates indicated above).

2) H-2-77646, Sh 1, Rev 1

Detail 4 (Z A7): Modify - see page 6 of this ECN.

3) H-2-78511, Sh 1, Rev 2

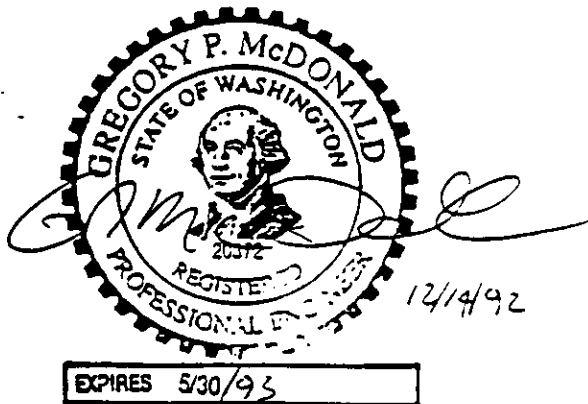
Test Station Table (Z B7): Change T(40-6) from N40256, W45740 to N40253, W45744

(NOTE TO AS-BUILT: Pictorially relocate test station on the Plan (Z C7) to coordinates indicated above.)

4) ATP # WHC-SD-B714-ATP-001, Rev 1

Pg 11, Para 8.1.7: Change ... (-) and (-) ... to ... (-), (-), and (-) ...

REGISTERED ENGINEER REVIEW
ELEC ONLY - ITEMS 1 THRU 3



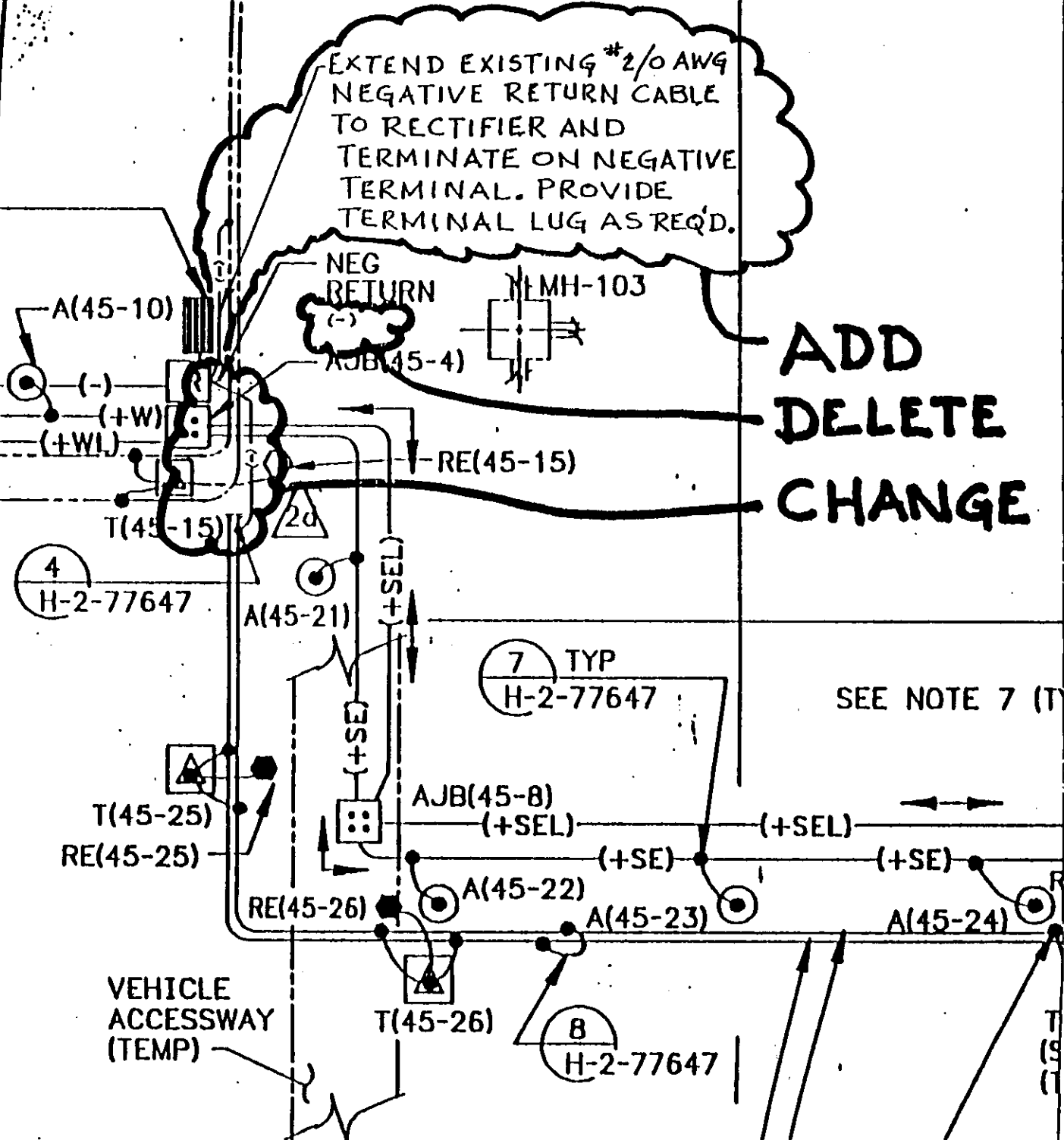
9313043.1638

DISI

NOTE 3
-2-77646)

REFERENCE
LINE (SEE
SHEET 2
Z D5)

IB
ULE



ECN No. B-714-166	Page 4/6
Rev. Orig. H-2-77645	Sh. 1 Rev. 2
Prep. By A R SNOWHITE	Ord. By G/H



1
H-2-77647
SEE NOTE 9
(TYP)

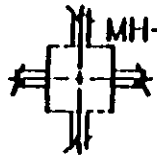
02/20/13 08:00

2"-GR-203-M25 -
2"-EW-203-M25 -
VAULT PIT

YAVLT

PLAN
SCALE: 1"=20'-0"

MH-102

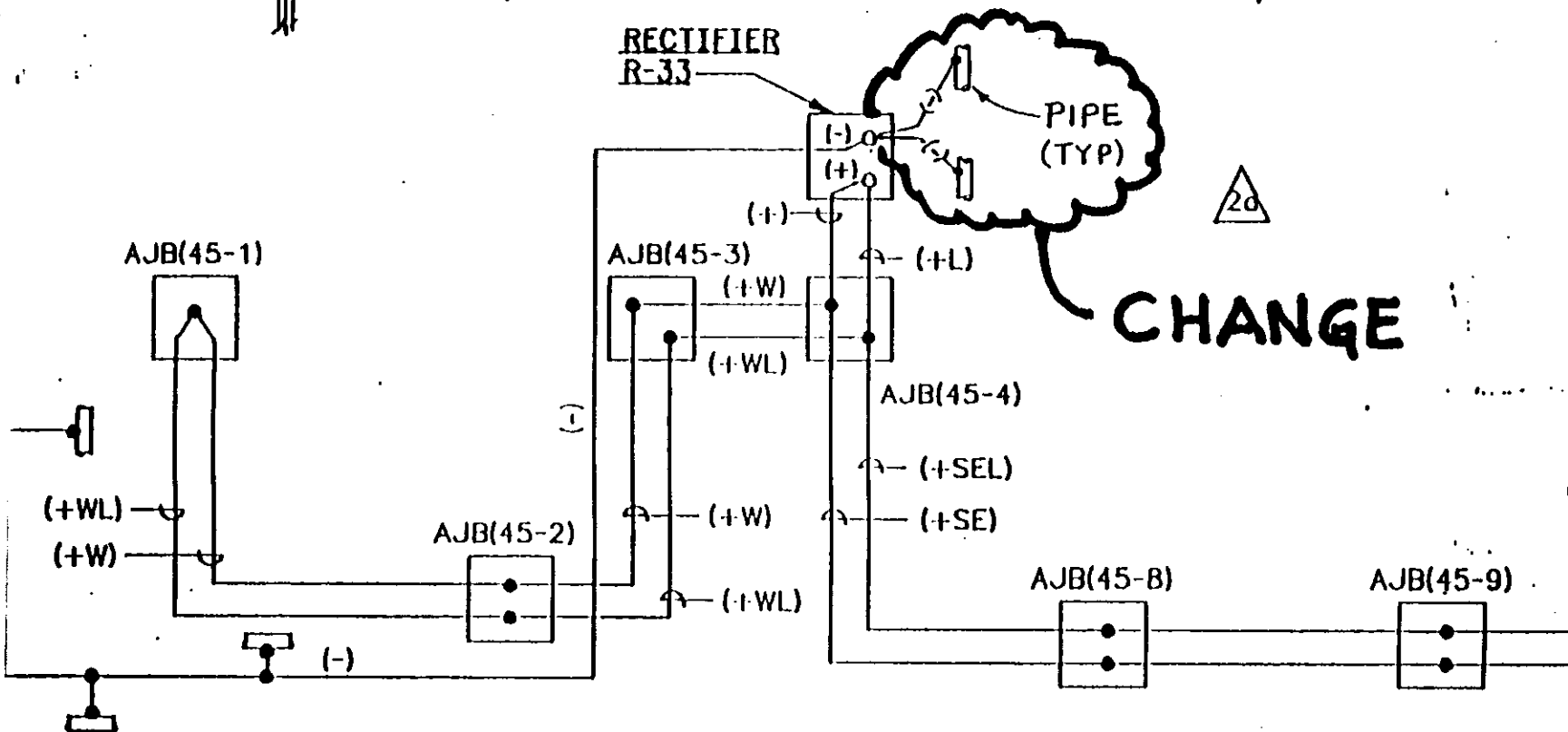


RECTIFIER
R-33

-PIPE
(TYP)

20

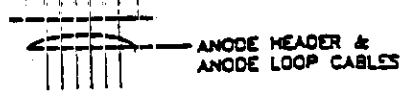
CHANGE



ANODE HEADER, ANODE LOOP & NEGATIVE RETURN CABLE CONNECTION DIAGRAM

II-2-98880	SI
II-2-98887	IN
SII 1 - SII 3	PL
II-2-98842	MO

ECN No. B-714-166	Page 5/16
Ref. Cnt. H-2-77645	Sh. 1 Rev. 2
Prep. by AR SNOWHITE	Ckd. By <i>GM</i>



EOM No. B-714-166

Page 6/6

Ref. Dwg. H-2-77646

Sh. 1

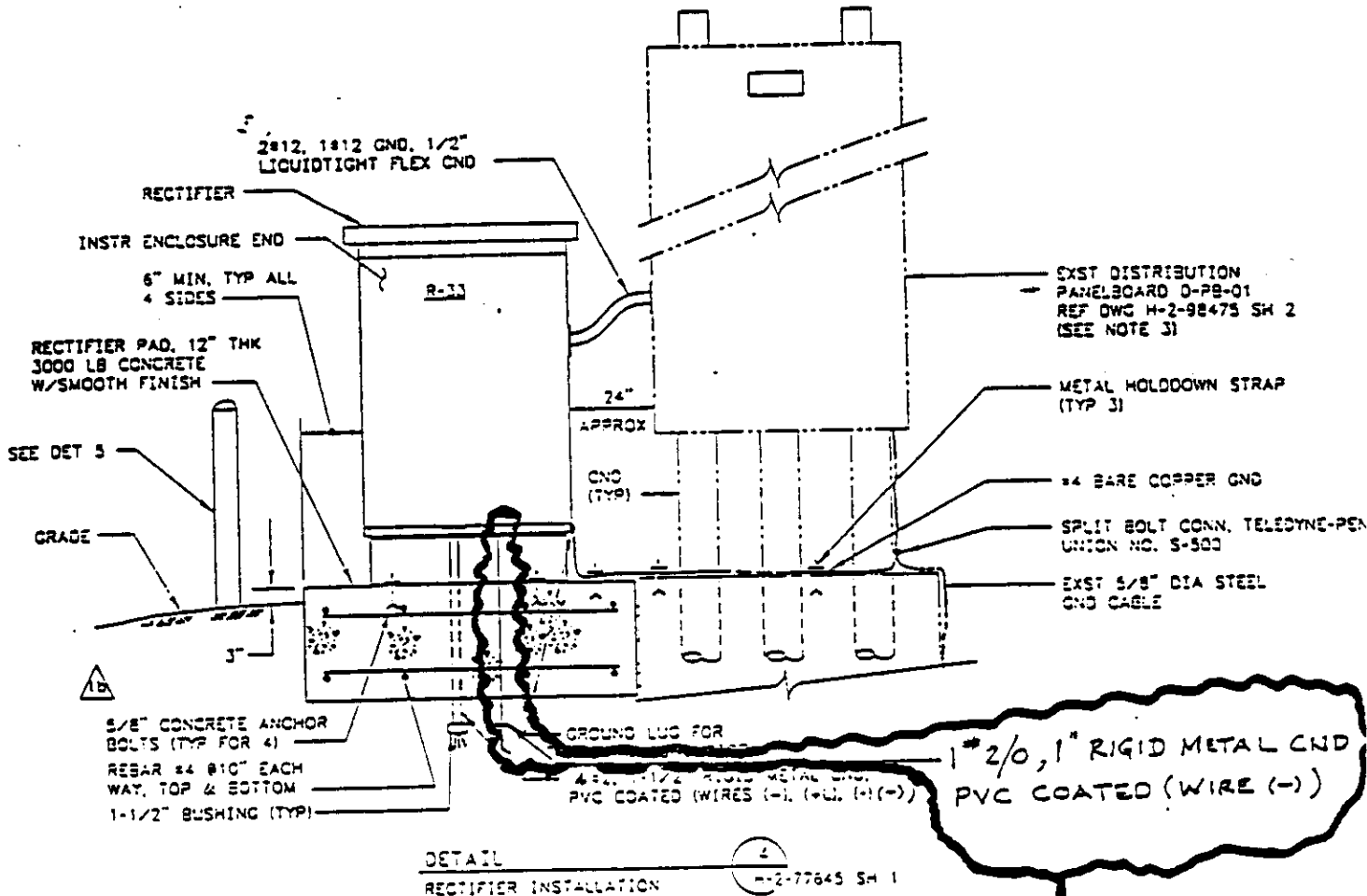
Rev. 1

Prep. By A R SNOWHITE

Ckd. By GPM

DETAIL 2

ANODE JUNCTION BOX
TYPICAL CONNECTION DIAGRAM
(SEE NOTE 1)



ADD

Date Received:		INFORMATION RELEASE REQUEST				Reference: WHC-CM-3-4	
Complete for all Types of Release							
Purpose					ID Number (include revision, volume, etc.)		
<input type="checkbox"/> Speech or Presentation <input type="checkbox"/> Full Paper (Check only one suffix) <input type="checkbox"/> Summary <input type="checkbox"/> Abstract <input type="checkbox"/> Visual Aid <input type="checkbox"/> Speakers Bureau <input type="checkbox"/> Poster Session <input type="checkbox"/> Videotape					<input checked="" type="checkbox"/> Reference <input type="checkbox"/> Technical Report <input type="checkbox"/> Thesis or Dissertation <input type="checkbox"/> Manual <input type="checkbox"/> Brochure/Flier <input type="checkbox"/> Software/Database <input type="checkbox"/> Controlled Document <input type="checkbox"/> Other		
					WHC-SD-8714-ATP-001, Rev. 1 List attachments. ECN 8714-166		
					Date Release Required <div style="font-size: 1.2em;">12/17/92</div>		
Title CATHODIC PROTECTION ACCEPTANCE TEST. PROCEDURE FOR GROUT VAULTS 102, 103 AND GPF					Unclassified Category UC-		Impact Level 3Q
New or novel (patentable) subject matter? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes If "Yes", has disclosure been submitted by WHC or other company? <input type="checkbox"/> No <input type="checkbox"/> Yes Disclosure No(s).					Information received from others in confidence, such as proprietary data, trade secrets, and/or inventions? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (Identify)		
Copyrights? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes If "Yes", has written permission been granted? <input type="checkbox"/> No <input type="checkbox"/> Yes (Attach Permission)					Trademarks? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (Identify)		
Complete for Speech or Presentation							
Title of Conference or Meeting					Group or Society Sponsoring		
Date(s) of Conference or Meeting		City/State		Will proceedings be published? <input type="checkbox"/> Yes <input type="checkbox"/> No Will material be handed out? <input type="checkbox"/> Yes <input type="checkbox"/> No			
Title of Journal							
CHECKLIST FOR SIGNATORIES							
Review Required per WHC-CM-3-4		Yes	No	Reviewer - Signature Indicates Approval			
				Name (printed)	Signature	Date	
Classification/Unclassified Controlled Nuclear Information		<input type="checkbox"/>	<input checked="" type="checkbox"/>				
Patent - General Counsel		<input type="checkbox"/>	<input checked="" type="checkbox"/>				
Legal - General Counsel		<input type="checkbox"/>	<input checked="" type="checkbox"/>				
Applied Technology/Export Controlled Information or International Program		<input type="checkbox"/>	<input checked="" type="checkbox"/>				
WHC Program/Project		<input type="checkbox"/>	<input checked="" type="checkbox"/>				
Communications		<input type="checkbox"/>	<input checked="" type="checkbox"/>				
RL Program/Project		<input type="checkbox"/>	<input checked="" type="checkbox"/>				
Publication Services		<input type="checkbox"/>	<input checked="" type="checkbox"/>				
Other Program/Project		<input type="checkbox"/>	<input checked="" type="checkbox"/>				
Information conforms to all applicable requirements. The above information is certified to be correct.							
Yes No References Available to Intended Audience <input type="checkbox"/> <input checked="" type="checkbox"/> Transmit to DOE-HQ/Office of Scientific and Technical Information <input type="checkbox"/> <input checked="" type="checkbox"/> Author/Requestor (Printed/Signature) Date T. W. Staehr <i>TW Staehr</i> 12/16/92				INFORMATION RELEASE ADMINISTRATION APPROVAL STAMP			
Intended Audience <input type="checkbox"/> Internal <input checked="" type="checkbox"/> Sponsor <input type="checkbox"/> External Responsible Manager (Printed/Signature) Date J. E. Van Beek <i>J. E. Van Beek</i> 12/16/92				Stamp is required before release. Release is contingent upon resolution of mandatory comments.			

ENGINEERING CHANGE NOTICE

Page 1 of 21. ECN ~~190652~~Proj.
ECN B-714-167

2. ECN Category (mark one) Supplemental <input type="checkbox"/> Direct Revision <input checked="" type="checkbox"/> Change ECN <input type="checkbox"/> Temporary <input type="checkbox"/> Standby <input type="checkbox"/> Supersedeure <input type="checkbox"/> Cancel/Void <input type="checkbox"/>		3. Originator's Name, Organization, MSIN, and Telephone No. T. K. Ehrhard, KEH, E6-42, 6-7412		4. Date 12-16-92	
		5. Project Title/No./Work Order No. GROUTED WASTE DISPOSAL FACILITIES B-714/ER8007		6. Bldg./Sys./Fac. No. 218-E-16	
		8. Document Numbers Changed by this ECN (includes sheet no. and rev.) SEE BLOCK 12		9. Related ECN No(s). None	
				10. Related PO No. N/A	
11a. Modification Work [] Yes (fill out Blk. 11b) [X] No (NA Blks. 11b, 11c, 11d)		11b. Work Package No. N/A		11c. Modification Work Complete N/A	
		11d. Restored to Original Condition (Temp. or Standby ECN only) N/A			
		Cog. Engineer Signature & Date		Cog. Engineer Signature & Date	
12. Description of Change Block 8 Document Numbers Changed: H-2-77577, Sh 1, Rev 1 H-2-77577, Sh 2, Rev 1 H-2-77618, Sh 5, Rev 2 H-2-77618, Sh 6, Rev 2 H-2-77618, Sh 7, Rev 2 H-2-77618, Sh 8, Rev 2 H-2-77618, Sh 9, Rev 2 H-2-77618, Sh 10, Rev 2 H-2-77618, Sh 11, Rev 1 H-2-77618, Sh 15, Rev 2 H-2-78490, Sh 5, Rev 2 H-2-78490, Sh 6, Rev 2 H-2-78490, Sh 7, Rev 2 H-2-78490, Sh 8, Rev 2 H-2-78490, Sh 9, Rev 2 H-2-78490, Sh 10, Rev 2 H-2-78490, Sh 11, Rev 1 H-2-78490, Sh 15, Rev 2 ***** 12. Description of Change: The above listed drawings are VOIDED in their entirety					
13a. Justification Criteria Change [] Design Improvement [] Environmental [] As-Found [X] Facilitate Const. [] Const. Error/Omission [] Design Error/Omission []					
13b. Justification Details As-built clarification.					
14. Distribution (include name, MSIN, and no. of copies) KEH DISTRIBUTION Const Doc Cntl E2-50 J. K. Epperley R1-29 R. K. Sanan [4] R4-05 J. E. Shapley N1-83 T. W. Staehr (PE) R3-27 J. E. Vanbeek R3-27 G. H. Weissberg R3-10 DOE/A. G. Lassila A5-10 CDWS #3 S2-10 CDWS #6 T2-03					
RELEASE STAMP OFFICIAL RELEASE 23 BY WHC DATE JAN 12 1993 Sta #10					

ENGINEERING CHANGE NOTICE

Page 2 of 2

B-714-167

15. Design Verification Required		16. Cost Impact		17. Schedule Impact (days)	
		ENGINEERING		CONSTRUCTION	
<input type="checkbox"/> Yes		Additional <input checked="" type="checkbox"/> \$ <i>Baseline 2 cost 8/23/92</i>		<input type="checkbox"/> \$ <i>N/A</i>	
<input checked="" type="checkbox"/> No		Savings <input type="checkbox"/> \$		Savings <input type="checkbox"/> \$	
				Improvement <input type="checkbox"/> <i>N/A</i>	
				Delay <input type="checkbox"/> <i>N/A</i>	

18. Change Impact Review: Indicate the related documents (other than the engineering documents identified on Side 1) that will be affected by the change described in Block 12. Enter the affected document number in Block 19.

SDD/DD	<input type="checkbox"/>	Seismic/Stress Analysis	<input type="checkbox"/>	Tank Calibration Manual	<input type="checkbox"/>
Functional Design Criteria	<input type="checkbox"/>	Stress/Design Report	<input type="checkbox"/>	Health Physics Procedure	<input type="checkbox"/>
Operating Specification	<input type="checkbox"/>	Interface Control Drawing	<input type="checkbox"/>	Spares Multiple Unit Listing	<input type="checkbox"/>
Criticality Specification	<input type="checkbox"/>	Calibration Procedure	<input type="checkbox"/>	Test Procedures/Specification	<input type="checkbox"/>
Conceptual Design Report	<input type="checkbox"/>	Installation Procedure	<input type="checkbox"/>	Component Index	<input type="checkbox"/>
Equipment Spec.	<input type="checkbox"/>	Maintenance Procedure	<input type="checkbox"/>	ASME Coded Item	<input type="checkbox"/>
Const. Spec.	<input type="checkbox"/>	Engineering Procedure	<input type="checkbox"/>	Human Factor Consideration	<input type="checkbox"/>
Procurement Spec.	<input type="checkbox"/>	Operating Instruction	<input type="checkbox"/>	Computer Software	<input type="checkbox"/>
Vendor Information	<input type="checkbox"/>	Operating Procedure	<input type="checkbox"/>	Electric Circuit Schedule	<input type="checkbox"/>
OM Manual	<input type="checkbox"/>	Operational Safety Requirement	<input type="checkbox"/>	ICRS Procedure	<input type="checkbox"/>
FSAR/SAR	<input type="checkbox"/>	IEFD Drawing	<input type="checkbox"/>	Process Control Manual/Plan	<input type="checkbox"/>
Safety Equipment List	<input type="checkbox"/>	Cell Arrangement Drawing	<input type="checkbox"/>	Process Flow Chart	<input type="checkbox"/>
Radiation Work Permit	<input type="checkbox"/>	Essential Material Specification	<input type="checkbox"/>	Purchase Requisition	<input type="checkbox"/>
Environmental Impact Statement	<input type="checkbox"/>	Fac. Proc. Samp. Schedule	<input type="checkbox"/>		<input type="checkbox"/>
Environmental Report	<input type="checkbox"/>	Inspection Plan	<input type="checkbox"/>		<input type="checkbox"/>
Environmental Permit	<input type="checkbox"/>	Inventory Adjustment Request	<input type="checkbox"/>		<input type="checkbox"/>

19. Other Affected Documents: (NOTE: Documents listed below will not be revised by this ECM.) Signatures below indicate that the signing organization has been notified of other affected documents listed below.

Document Number/Revision	Document Number/Revision	Document Number/Revision

20. Approvals

Signature	Date	Signature	Date
OPERATIONS AND ENGINEERING		ARCHITECT-ENGINEER	
Cog./Project Engineer <i>W. Steinhilber</i>	<i>12/23/92</i>	PE <i>Q.P.</i>	<i>12/21/92</i>
Cog./Project Engr. Mgr. <i>J. Van Buren</i>	<i>12/23/92</i>	QA <i>B.R. Fillion</i>	<i>12-21-92</i>
QA		Safety <i>D. K. Jones</i>	<i>12-21-92</i>
Safety		Design-ENVIR: <i>P. K. Rallebach</i>	<i>12-18-92</i>
Security		INSTN: <i>H. J. DeYoung</i>	<i>12/18/92</i>
Proj. Prog./Dept. Mgr.		PLE-Review: <i>A. K. Kain</i>	<i>12-18-92</i>
Def. React. Div.		ENVIR-Review: <i>P. K. Rallebach</i>	<i>12-18-92</i>
Chem. Proc. Div.		CQA <i>P. K. Rallebach</i>	<i>12-21-92</i>
Def. Wst. Mgmt. Div.		DEPARTMENT OF ENERGY	
Adv. React. Dev. Div.		Signature or Letter No.	
Proj. Dept.			
Environ. Div.		ADDITIONAL	
IRM Dept.			
Facility Rep. (Ops.)			
Other			

Attachment 6

**GROUT TREATMENT FACILITY
Unit Managers Meeting
Ecology Office, Kennewick, Washington**

**February 18, 1993
9:00 a.m. - 10:00 a.m.**

**CLARIFICATION OF RCRA HAZARDOUS WASTE TESTING
REQUIREMENTS FOR MIXED WASTE
DRAFT GUIDANCE
MARCH 1992**

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CLARIFICATION OF RCRA HAZARDOUS WASTE TESTING

REQUIREMENTS FOR MIXED WASTE

DRAFT GUIDANCE

MARCH 1992

510-340135

I. BACKGROUND

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Mixed waste is defined as waste that is both hazardous waste subject to the requirements of the Resource Conservation and Recovery Act (RCRA) and radioactive waste subject to the requirements of the Atomic Energy Act (AEA) (see revised Joint EPA/NRC Guidance on the Definition and Identification of Commercial Mixed Low-Level Radioactive and Hazardous Waste). Fundamental to determining whether a radioactive waste is a mixed waste is whether the waste is a RCRA hazardous waste. Mixed waste is regulated as a RCRA hazardous waste in those states where EPA implements the entire RCRA Subtitle C program (i.e., unauthorized states) as well as in authorized states which have obtained specific authorization from EPA to implement a mixed waste program. Currently, there are five unauthorized States (Alaska, California, Hawaii, Iowa, and Wyoming) and 29 additional states with mixed waste authorization (refer to attached list).

This guidance is intended for use by NRC licensees. However, much of its content may be useful as well for Federal facilities that generate mixed waste. The guidance should be used with an understanding that RCRA authorized states may have more stringent requirements than the federal requirements discussed here. Therefore, state hazardous waste agencies should be contacted for their specific testing, analysis and other hazardous waste requirements.

Described in the guidance are: (1) the current regulatory requirements for determining if a waste is a RCRA hazardous waste, (2) the waste analysis information necessary for proper treatment, storage, and disposal of mixed waste, and (3) the implications of the RCRA land disposal restrictions (LDRs) on the waste characterization and analysis requirements. This information will be useful for radioactive mixed waste generators, who must determine if their waste is a mixed waste; for those generators storing mixed waste on-site in tanks or containers for longer than 90 days, who consequently become responsible for meeting RCRA and NRC storage requirements; and for those facilities who accept mixed waste for off-site treatment, storage, or disposal.

Facilities handling wastes under RCRA must characterize their waste for several purposes:

- (1) To determine if their waste is a hazardous waste;

- (2) To determine if their hazardous waste is restricted by the LDRs;
- (3) To ensure prior to land disposal that the restricted wastes meet a required treatment standard; and
- (4) To verify that the hazardous wastes received by off-site facilities are in fact the same wastes described on the shipping papers or manifest, and the waste has been characterized sufficiently to ensure safe management at the site.

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This guidance addresses the need for chemical analysis of mixed wastes to meet these purposes. It also emphasizes ways in which unnecessary testing of mixed wastes may be avoided. This is important when handling mixed waste, since each sampling, work-up, or analytical event may involve an incremental exposure to radiation. This guidance encourages the use of process knowledge, where possible, in making RCRA hazardous waste determinations involving mixed waste, and encourages elimination of redundant testing by off-site treatment and disposal facilities where valid generator-supplied and certified data are available.

Because mixed waste testing may pose a possibility of increased worker exposure to radiation, this guidance also describes methods by which individuals who analyze mixed waste samples may reduce radiation exposures and satisfy the intent of the RCRA testing requirements. Testing to determine whether wastes are hazardous under the RCRA toxicity characteristic may pose special concerns which are examined in Section III of this guidance.

All of the activities described in this guidance are subject to the requirements of both the AEA and RCRA. The focus here is on the RCRA requirements. Nuclear Regulatory Commission (NRC) and NRC Agreement State licensees are authorized to receive, possess, use (which includes storing, sampling, testing, and treating), and dispose of AEA-licensed materials. The RCRA activities described in this guidance presume that the activities are consistent with NRC, or Agreement State, regulations and license conditions and incorporate the As Low As Reasonably Achievable (ALARA) concept. If this is not the case, licensees should seek resolution by requesting license amendments, approval of modifications to their RCRA permits or interim status Part A

¹ALARA, codified in 10 CFR Part 20, refers to the practice of maintaining all radiation exposures, workers and the general public, as low as reasonably achievable.

applications, or resolution under both authorities. If a resolution cannot be achieved through the flexibility provided by the two regulatory frameworks, then and only then should licensees seek resolution under Section 1006(a) of RCRA. Licensees are reminded that if an inconsistency exists, relief will be limited to that specific RCRA requirement and that the determination of an inconsistency would not relieve the licensee from all other RCRA requirements. Section 1006(a) and radiological hazard considerations are addressed more fully in Section III and IV of this guidance. NRC licensees should also include the necessary flexibility in their RCRA permit waste analysis plans to accommodate the sampling and testing required to meet AEA requirements.

II. DETERMINATIONS BY GENERATORS THAT A WASTE IS HAZARDOUS

A solid waste is a RCRA hazardous waste if it meets one of two conditions: (1) the waste is specifically "listed" in 40 CFR Part 261 Subpart D, or (2) the waste exhibits one of the four "characteristics" identified in 40 CFR Part 261 Subpart C:

- ignitability,
- corrosivity,
- reactivity, or
- toxicity.

(a) Listed Wastes

Generators of solid waste (and, therefore, potentially mixed waste) must establish whether their waste is a RCRA hazardous waste. For listed wastes, such determinations can be made by examining RCRA waste codes. Most waste codes rely on specific descriptions of the waste, processes, or chemical compounds. For example, K103 waste is defined as "process residues from aniline extraction from the production of aniline." A generator who produces such residues should know, without any sampling or analysis, that these wastes are "listed" RCRA hazardous wastes. Additional listed wastes are generated by non-source specific processes. For example, F001 waste is defined as "spent halogenated solvents used in degreasing...." and includes tetrachloroethylene, trichloroethylene, as well as a number of other solvents. A generator using one of the F001 halogenated solvents for degreasing should know that this waste is a listed RCRA hazardous waste.

In addition to being specifically listed, the "derived from" and "mixture" rules state that any solid waste derived from the treatment, storage, or disposal of a listed RCRA hazardous waste,

or any solid waste mixed with a listed RCRA hazardous waste respectively, is itself a listed RCRA hazardous waste until delisted (§261.3).² Please note however, that if a listed hazardous waste is listed solely for a characteristic identified in Subpart C of 40 CFR Part 261 (e.g., a F003 spent solvent which is listed only because it is ignitable) is mixed with a solid waste and the resultant mixture no longer exhibits any characteristic of a hazardous waste, then the waste mixture is no longer a hazardous waste (see §261.3(a)(2)(iii)).

(b) Characteristic Wastes

The hazardous characteristic is based on physical/chemical properties of the waste. Thus, physical/chemical testing of the waste may be appropriate for determining whether a waste is a characteristic waste. RCRA regulations, however, do not require testing. Rather, generators must determine whether the waste is a RCRA hazardous waste. Such a determination may be made based on one's knowledge of the chemical processes that generated the waste. The regulations are clear on this point (§262.11):

(c) ...if the waste is not listed [as hazardous waste] in subpart D [of 40 CFR Part 261], the generator must then determine whether the waste is identified in subpart C of 40 CFR part 261 by either:

(1) Testing the waste according to the methods set forth in Subpart C of 40 CFR Part 261, or according to an equivalent method approved by the Administrator under 40 CFR 260.21; or

(2) Applying knowledge of the hazard characteristic of the waste in light of the materials or the processes used.

² The "mixture" and "derived-from" rules were vacated and remanded to EPA for failure to provide adequate notice and opportunity for comment before their 1980 promulgation, in Shell Oil v. EPA, No. No. 80-1532 (D.C. Cir. Dec. 6, 1991). In response to the remand, EPA published an interim final rule in March 1992, which reinstated the "mixture" and "derived-from" rules until April 28, 1993. EPA also issued a notice of proposed rulemaking to solicit comment on the rules and on other means to manage waste mixtures and residues.

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A generator, therefore, may apply knowledge of the materials and chemical process to make the hazardous characteristic determination. In such cases where sufficient knowledge exists, the generator need not test the waste, although generators and subsequent handlers would be in violation of RCRA if they managed hazardous waste erroneously classified as non-hazardous outside of the RCRA hazardous waste system. For this reason, facilities wishing to minimize testing often assume a questionable waste is hazardous and handle it accordingly.

The generator must also comply with the land disposal restriction regulations in 40 CFR Part 268 which require the generator to determine whether the waste is also prohibited from land disposal (refer to Section V for a detailed discussion of these requirements). For the hazardous characteristic, and the determination as to whether a waste is restricted from land disposal under §268.7(a), the option of using materials and process knowledge is available to the generator. However, if the waste is determined to be land disposal restricted in §268.7(a), some testing will generally be required prior to land disposal, except where technologies are specified as the treatment standard. EPA recommends that the frequency of such testing be held to a minimum, to avoid duplicative testing and its associated radiation exposures

In determining whether a radioactive waste is a RCRA hazardous waste, the generator may test a surrogate material (i.e., a chemically identical material with significantly less or no radioactivity) to project the RCRA status of a radioactive waste. This substitution of a surrogate material may either partially or completely supplant the testing of the mixed waste. A surrogate material, however, should only be used if the surrogate material faithfully represents the hazardous constituents of the mixed waste. The following example explains the use of surrogates. A generator is required to determine if certain spent degreasing solvents from regular maintenance activities are mixed waste. If this determination cannot be made with material and process knowledge only, then the generator is required to test these materials. Rather than testing the radioactive waste stream, however, the generator may opt to test a surrogate, perhaps an identical spent degreasing solvent generated by similar maintenance activities in another part of the plant. This substitution of materials is acceptable as long as the surrogate material faithfully represents the characteristics of the actual waste and

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its testing provides sufficient information for the generator,³ reasonably to determine if the waste is hazardous under RCRA.

Also, as part of the hazardous waste determination, generators must document test results or other data and methods used. Specifically, §262.40(c) states that "a generator must keep records of any test results, waste analyses, or other determinations made in accordance with §262.11 for at least three years from the date that the waste was last sent to on-site or off-site treatment, storage, or disposal."

In summary, testing listed wastes to make the hazardous waste determination is not necessary, because most RCRA waste codes or listings identify specific waste streams from specific processes. Testing waste for a characteristic will occur more often, but is not required if a generator has sufficient knowledge about the waste and its physical/chemical properties to determine that it is non-hazardous, or if the generator chooses to assume the waste is hazardous without testing. Hazardous waste determinations based on generator knowledge can be used to reduce the sampling of mixed waste and prevent unnecessary exposure to radioactivity. The same principle holds for a generator's determination that their wastes are subject to the RCRA land disposal restrictions in §268.7(a).

III. TESTING PROTOCOLS FOR CHARACTERISTICS

When testing is conducted to determine whether one has a RCRA hazardous waste, there are acceptable test protocols or criteria for each of the four characteristics. (Testing for characteristics must be done on a representative sample of the waste or using any applicable sampling methods specified in Appendix I of 40 CFR Part 261.)

³ Generators who also treat their waste, however, are considered to be, and are, subject to the requirements for treatment facilities unless they treat waste in accumulation tanks or containers for 90 days or less in accordance with §262.34. Treatment facilities must periodically test the treated waste residue from prohibited wastes to determine whether it meets the best demonstrated available technology (BDAT) treatment standards and may not rely on materials and process knowledge to make this determination (§268.7(b)). This testing must be conducted according to the frequency specified in the facility's waste analysis plan (refer to Section IV for a detailed discussion of treatment, storage, and disposal facility requirements).

Ignitability -- The flash point is to be determined by a Pensky-Martens Closed Cup Tester, using the test method specified in ASTM Standard D-93-79 or D-93-80, or a Setaflash Closed Cup Tester, using the test method specified in ASTM Standard D-3278-78, or as determined by an equivalent test method approved by the Administrator under procedures set forth in §260.20 and 260.21 (see "Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods," 3rd Ed., EPA, OSWER, SW-846, Methods 1010 and 1020⁴).

Corrosivity -- The pH is to be determined by a pH meter using either an EPA test method (i.e., SW-846, Methods 9040 and 9041) or an equivalent test method approved by the Administrator under procedures set forth in §260.20 and 260.21. Steel corrosion is to be determined by the test method specified in NACE (National Association of Corrosion Engineers) Standard TM-01-69 as standardized in "Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods," 3rd Ed. (EPA, OSWER, SW-846, Method 1110), or an equivalent test method approved by the Administrator under procedures set forth in §260.20 and 260.21.

Reactivity -- There are no specified test protocols for reactivity. The regulation in §261.23 defines reactive wastes to include wastes that have any of the following properties: (1) normally unstable and readily undergoes violent change without detonating; (2) reacts violently with water; (3) forms potentially explosive mixtures with water; (4) generates dangerous quantities of toxic fumes, gases, or vapors when mixed with water; (5) in the case of cyanide- or sulfide-bearing wastes, generates dangerous quantities of toxic fumes, gases, or vapors when exposed to acidic or alkaline conditions; (6) explodes when subjected to a strong initiating force or if heated under confinement; (7) explodes at standard temperature and pressure; or (8) fits within the Department of Transportation's forbidden explosives, Class A explosives, or Class B explosives classifications.

The Agency has elected to rely on a descriptive definition for these reactivity properties because of inherent deficiencies associated with available methodologies for measuring such a varied class of effects with the exception of points

⁴ EPA is currently preparing, and will soon publish, a third edition of "Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods." Hazardous and mixed waste generators and management facilities should verify that the analytical method that they use to analyze hazardous waste has not been superseded in the upcoming third edition.

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number 4 and 5 above. The guidance method used to quantify the reactive cyanide and sulfide bearing wastes is provided in Chapter 7 of "Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods," 3rd Ed., EPA, OSWER, SW-846.

Toxicity Characteristic -- The toxicity characteristic (TC) is determined by the Toxicity Characteristic Leaching Procedure (TCLP), as described in 40 CFR Part 261 Appendix II (SW-846, Method 1311). The TCLP was recently modified and revised. (55 Federal Register 26986, June 29, 1990) Note that the expanded and refined TCLP is also required (in most cases) for land disposal restriction compliance determinations. Differences between the TCLP and the previously required Extraction Procedure (EP) include improved analysis of the leaching of organic compounds, the elimination of constant pH adjustment, the addition of a milling or grinding requirement for solids (waste material solids must be milled to particles less than 9.5 mm in size), and other more detailed alterations.⁵ The TC rule adds 25 organic compounds to the leaching test.

[The TCLP recommends a minimum sample size of 100 grams (Section 7.2) but sample sizes of less than 100 grams can be used if the result is that the test is still sufficiently sensitive and can measure the constituents of interest at the regulatory levels prescribed by the TC.] Other variances to the published testing protocols are permissible (under §260.20 - 21) but must be approved by rule by EPA.

EPA is reviewing the degree of flexibility in sampling and analysis that can be added to the regulations. In a recent proposal to modify the testing requirement, the Agency stated "[EPA] anticipates making changes in the final promulgation to

⁵ Note that when using the TCLP if any liquid fraction of the waste positively determines that hazardous constituents in the waste are above regulatory levels, then it is not necessary to analyze the remaining fractions of the waste. Extraction using the zero headspace extraction vessel (ZHE) is not required, furthermore, if the analysis of an extract obtained using a bottle extractor demonstrates that the concentration of a volatile compound exceeds the specified regulatory levels. The use of a bottle extractor, however, may not be used to demonstrate that the concentration of a volatile compound is below regulatory levels. (40 CFR 261 Appendix II Sections 1.3 and .4).

SW-846 that will allow the analyst needed latitude regarding sample size, sample dilution, sample concentration, and choice of analytical methodology when macroanalysis is performed" (55 FR 4442; February 8, 1990). EPA plans to finalize this around June, 1992.

NRC regulations do not describe specific testing requirements for wastes to determine if a waste is radioactive. However, both NRC and Department of Transportation regulations contain requirements applicable to characterizing the radioactive content of the waste before shipment. For example, NRC's regulations in 10 CFR 20.311 (20.2006 of the Revised Part 20) require that the manifest include, as completely as practicable, the radionuclide identity and quantity, and the total radioactivity. NRC regulations also require that generators determine the disposal Class of the radioactive waste and outline waste form requirements that must be met before the waste is suitable for land disposal. These regulations are referenced in 10 CFR 20.311 (20.2006 of the Revised Part 20) and are outlined in detail at 10 CFR Part 61.55 and 61.56. Mixed waste generators are reminded that both RCRA and NRC waste testing and waste form requirements must be satisfied. Generators may also be required to amend their NRC or Agreement States licenses in order to perform the tests required under RCRA. In addition, if an NRC licensee uses an outside laboratory to test his or her waste, that laboratory may be required to possess an NRC or Agreement State license. It is the responsibility of the generator to determine if the outside laboratory possesses the proper license(s) prior to transferring the waste to the laboratory for testing.

Where radioactive wastes (or wastes suspected of being radioactive) are involved in testing, it has been suggested that the testing requirements of RCRA may run counter to the aims of the AEA. The AEA requirements that have raised inconsistency concerns with respect to RCRA testing procedures include ALARA, criticality and security. Neither EPA nor NRC is aware of any specific instances where RCRA compliance has been inconsistent with the AEA. However both agencies acknowledge the potential for an inconsistency to occur.⁶ Both agencies also believe, that the potential for inconsistencies can be reduced significantly by a better understanding of the RCRA requirements, a

⁶ An inconsistency occurs when compliance with one statute or set of regulations would necessarily cause non-compliance with the other. It may stem from a variety of considerations including those related to occupational exposure, criticality and other safeguards.

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greater reliance on materials and process knowledge, the use of surrogate materials when possible, and the use of controlled atmosphere apparatuses for mixed waste testing.

Where testing is conducted, the use of glove boxes and other controlled atmosphere apparatuses during the testing of the radioactive waste material lessens exposure concerns significantly and may help to reconcile the required testing requirements (including milling) with concerns about maintaining radioactivity exposure As Low As Reasonably Achievable (ALARA) or meeting other AEA requirements. If such protective measures are unavailable or do not adequately reduce radiation exposures or address other factors of concern, an inconsistency might be construed under Section 1006 of RCRA. A licensee or applicant who suspects that an inconsistency may exist should contact both the AEA and RCRA regulatory agencies. These regulatory agencies will deliberate and consult on whether there is an unresolvable inconsistency and, if one exists, they shall attempt to fashion the necessary relief from the particular RCRA provision that gives rise to the inconsistency. However, all other RCRA regulatory requirements would apply. That is, such a conclusion does not relieve hazardous waste facility owner/operators of the responsibility to ensure that the mixed waste is managed in accordance with all other applicable RCRA regulatory requirements. Owner/operators of mixed waste facilities are encouraged to address and document this potential situation and its resolution in the RCRA facility waste analysis plan which must be submitted with the Part B permit application, or addressed in a permit modification.

IV. DETERMINATIONS BY TREATMENT, STORAGE, OR DISPOSAL FACILITY OWNER/OPERATORS

General Waste Analysis for Proper Management

Owner/operators of facilities that treat, store, or dispose of hazardous wastes must obtain a chemical and physical analysis of a representative sample of the waste (see §264.13 for permitted facilities, or §265.13 for interim status facilities). The purpose of this analysis is to assure that owner/operators have sufficient information on the properties of the waste to be able to treat, store, or dispose of the waste in a safe and appropriate manner.

⁷ A representative sample means a sample of a universe or whole (e.g., waste pile, lagoon, ground water) which can be expected to exhibit the average properties of the universe or whole (§260.10).

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The waste analysis may include data developed by the generator and existing published or documented data on the hazardous waste or on hazardous waste generated from similar processes. In some instances, however, information supplied by the generator may not fully satisfy the waste analysis requirement. For example, in order to treat a particular waste, one may need to know not only the chemical composition of the waste but also its compatibility with the techniques and chemical reagents used at the treatment facility. Where such information is not otherwise available, the owner/operator will be responsible for gathering relevant data on the waste in order to ensure proper management.

The requirements and frequency of waste analysis for a given facility will be spelled out in the facility's waste analysis plan. The waste analysis plan specifies the parameters for which each hazardous waste will be analyzed, the rationale for selecting these parameters (i.e., how analysis for these parameters will provide sufficient information on the waste's properties), and the test methods that will be used to test for these parameters. The waste analysis plan also will specify the sampling method that will be used to obtain a representative sample of the waste to be analyzed; the frequency with which the initial analysis of the waste will be reviewed or repeated to ensure that the analysis is accurate and up to date; and, for off-site facilities, the waste analyses to be supplied by the hazardous waste generators. The appropriate parameters for each waste analysis plan are determined on an individual basis as part of the permit application review process.

Analysis Required to Verify Off-site Shipments

The owner/operator of a facility that receives mixed waste from off-site must inspect and, if necessary, analyze each hazardous waste shipment received at the facility to verify that it matches the identity of the waste specified on the accompanying LDR notification or manifest (see §264.13(c) or §265.13(c)). Such inspections will follow the sampling and testing procedures set forth in the facility's waste analysis plan, which is to be kept at the facility.

Because of concern about the inherent hazards of sampling and analyzing radioactive material, and in particular, the potential risk to workers from exposure to radiation posed by duplicative testing of mixed wastes, redundant testing by the generator and off-site facilities should be avoided. In addition, waste analysis plans should include provisions to keep radiation exposures as low as reasonably achievable, (ALARA) and incorporate relevant AEA related requirements and regulations.

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It should be also be emphasized that where analysis is necessary, that RCRA regulations do not require the analysis of every movement of waste received at an off-site facility. As explained above, the purpose of the waste analysis is to verify that the waste received at off-site facilities is correctly identified, and to provide enough information to ensure that it is properly managed by the facilities.

For example, if a facility receives a shipment of several sealed drums of mixed waste, a representative sample from only one drum may be adequate, if the owner/operator has reason to believe that the chemical composition of the waste is identical in every drum. In such a case, the drum emitting the least amount of measurable radioactivity could be sampled to minimize exposure to radiation (variations in radioactivity do not necessarily suggest different chemical composition). This procedure also would apply to a shipment of several types of waste. If the owner/operator has reason to believe that the drums in the shipment contain different wastes, then selecting a representative sample might involve drawing a sample from each drum or drawing a sample from one drum in each "set" of drums containing similar wastes.

Once this waste analysis requirement has been satisfied, routine retesting of later shipments would not be required if the owner/operator can determine that the properties of the waste he or she manages will not change. However, the regulations (§264.13(a)(3)) do require that waste be reanalyzed if:

- (1) the owner/operator is notified, or has reason to believe, that the process or operation generating the waste has changed [in a way such that the hazardous property or characteristics of the waste would change]; and
- (2) for off-site facilities, when the results of the verification analysis indicate that the [composition or characteristics of the] waste does not match the accompanying manifest or shipping paper.

V. DETERMINATIONS UNDER THE LAND DISPOSAL RESTRICTIONS (LDRs)

Use of process knowledge and generator-supplied data may also be used to satisfy the waste characterization requirements imposed by the LDRs for mixed wastes. The Hazardous and Solid Waste Amendments (HSWA) to RCRA (P.L. 98-616), enacted on November 8, 1984, established the LDR program. This Congressionally

mandated program set deadlines (RCRA Sections 3004(d) - (g)) for EPA to evaluate all hazardous wastes and required the Agency to set levels or methods of treatment which would substantially diminish the toxicity of the waste or minimize the likelihood of migration of hazardous constituents from any RCRA waste. Beyond specified dates, prohibited wastes that do not meet the treatment standards are banned from land disposal unless they are disposed of in a so-called "no-migration" unit (i.e., a unit where the Administrator has granted a petition which successfully demonstrated to a reasonable degree of certainty that there will be no migration of hazardous constituents from the disposal unit for as long as the wastes remain hazardous) (§268.6). Certain categories of prohibited wastes also may be granted temporary variances from the land disposal prohibition (i.e., case-by-case (§268.5) and national capacity variances (Part 268, Subpart C)); these wastes, however, still are restricted and must be disposed of in units meeting the minimum technology requirements.

The requirements of the land disposal restrictions program apply to generators, transporters, and owner/operators of hazardous waste treatment, storage, and disposal facilities. Not all hazardous wastes are subject to Part 268. For instance, certain wastes that are identified or listed after November 8, 1984, such as wastes exhibiting the toxicity characteristic for which land disposal prohibitions or treatment standards have not yet been promulgated, are not regulated under Part 268.

Determinations By Generators

Generators are responsible for determining whether their waste is restricted from land disposal (§268.7(a)). Such determinations can be made either by testing the waste (or an extract of the waste developed by using the TCLP or in certain cases the Extraction Procedure (EP)) or by using process knowledge (see §268.7(a)). Generators (as well as treatment facilities and land disposal facilities) that handle mixed waste may have to obtain or amend their radioactive materials licenses if they test or treat mixed waste. If generators test hazardous wastes that are not listed and exhibit a characteristic only, the EP or the TCLP may be used. The TCLP generally yields similar results as the EP; however, in certain matrices the TCLP yields higher lead and arsenic concentrations than the EP. In such cases, a negative

⁸ A prohibited waste may not be land disposed unless treated to the specified BDAT treatment standards. A waste that is subject to a variance, such as a national capacity variance, does not need to comply with the BDAT treatment standards, but is "restricted" as it must be land disposed in a facility that meets the minimum technology standards.

hazardous waste determination using the EP will be accepted for determining that the waste is not restricted from land disposal. The rationale for using the EP instead of the TCLP for characteristic wastes is explained in 55 FR 3865, January 31, 1991. For further guidance on using the EP for the land disposal restriction determination, refer to figures one and two at the end of this document.

If a waste is found to be land disposal restricted, generators must determine if their waste meets applicable treatment standards or is subject to a variance from the applicable standards. Generators who determine that their waste meets the applicable treatment standards must certify to this determination and notify the treatment, storage or land disposal facility that receives the waste (§268.7(a)(2)). This determination, similarly, can be made either based on knowledge of the waste or by testing the waste or waste extract (developed by using the TCLP). Notification to the receiving facility must include the following: a notice with the EPA Hazardous Waste Number; the corresponding treatment standards and all applicable prohibitions (referencing is permissible); the manifest number; waste analysis data (if available); and a certification that the waste delivered to a disposal facility meets the treatment standard, and that the information included in the notice is true, accurate, and complete (§268.7(a)(2)). In addition, records of all waste analyses or supporting data used to make process knowledge determinations must be maintained by the generator.

Generators who determine that their waste does not meet the applicable treatment standards must ensure that this waste meets the applicable standards prior to disposal. The generator must notify the treatment facility of the appropriate treatment standards. This notification must include the following information: EPA Hazardous Waste Number; the corresponding treatment standards and all applicable prohibitions (referencing is permissible); the manifest number; and waste analysis data if available (§268.7(a)(1)).

Generators whose wastes are subject to a case-by-case extension under §268.5, an exemption under §268.6 (a no-migration variance), an extension under §268.1(c)(3), or a nationwide variance under Subpart C of Part 268 must also notify the land disposal facility of this fact.

⁹ Referencing is permissible except for wastes F001 - F005, F039, and wastes prohibited pursuant to §268.32 or RCRA Section 3004(d). Applicable treatment standards must be included or specified for these wastes. (55 FR 22687)

Determinations by Treaters and Disposers

Owner/operators of treatment facilities that receive wastes that do not meet the treatment standards are responsible for treating the waste to the applicable treatment standards or by the specified technology(ies). Owner/operators of treatment facilities must test the treatment residues using the appropriate test method (according to the frequency established in their waste analysis plans) to determine whether the treated residues meet the waste extract concentration level, where the treatment standard is based on levels in the waste extract. Owner/operators of treatment facilities, however, do not need to test the treated residues if the treatment standard is a specified-technology.

Owner/operators of land disposal facilities under the LDRs are responsible for ensuring that only waste meeting the treatment standards (i.e., wastes not prohibited from disposal or wastes that are subject to an exemption or variance) are land disposed. Owners/operators must periodically test wastes received at the facility for disposal (i.e., corroborative testing) as specified in the waste analysis plan (§264.15 and §265.15). The results of any waste analyses are placed in the land disposal facilities' operating records along with a copy of all certifications and notices (§268.7(c)).

As clarified in the LDR Third Third rule (55 FR 22669, June 1, 1990), the frequency of testing for treatment and disposal facilities should be determined on a case-by-case basis by the RCRA permit writer. This flexibility is necessary because of the variability of waste types that may be encountered. Mixed waste is unique for its radioactive/hazardous composition and dual management needs. Each sampling or analytical event involving mixed waste may result in an incremental exposure to radiation, and EPA's responsibility to protect human health and the environment must show due regard for minimizing this unique exposure risk. These are factors which should be considered in implementing the flexible approach to determining testing frequency spelled out in the Third Third Rule language. This flexible approach may allow reduction in testing where there is no variation in the process that generates the waste or in the treatment process that treats the waste, and an initial analysis of the waste is available. Also, the approach may apply to mixed wastes shipped to off-site facilities, where redundant testing is minimized by placing greater reliance on the characterization developed and certified by earlier generators and treatment facilities. On the other hand, where waste composition is not well known, testing frequency might have to increase. Waste analysis plan conditions in the permits of mixed waste facilities should reflect these principles.

VI. SAFETY

EPA and NRC are aware of potential hazards attributable to testing hazardous waste. Moreover, EPA and NRC recognize that the radioactive component of mixed waste may pose additional hazards to laboratory personnel, inspectors, and others who may be exposed during sampling and analysis. All sampling should be conducted in accordance with procedures that minimize exposure and ensure personnel safety. Further, testing should be conducted in laboratories licensed by NRC or the appropriate NRC Agreement State authority. EPA and NRC believe that a combination of common sense, modified sampling procedures, and cooperation among State and Federal regulatory agencies will minimize any hazards associated with sampling and testing mixed waste.

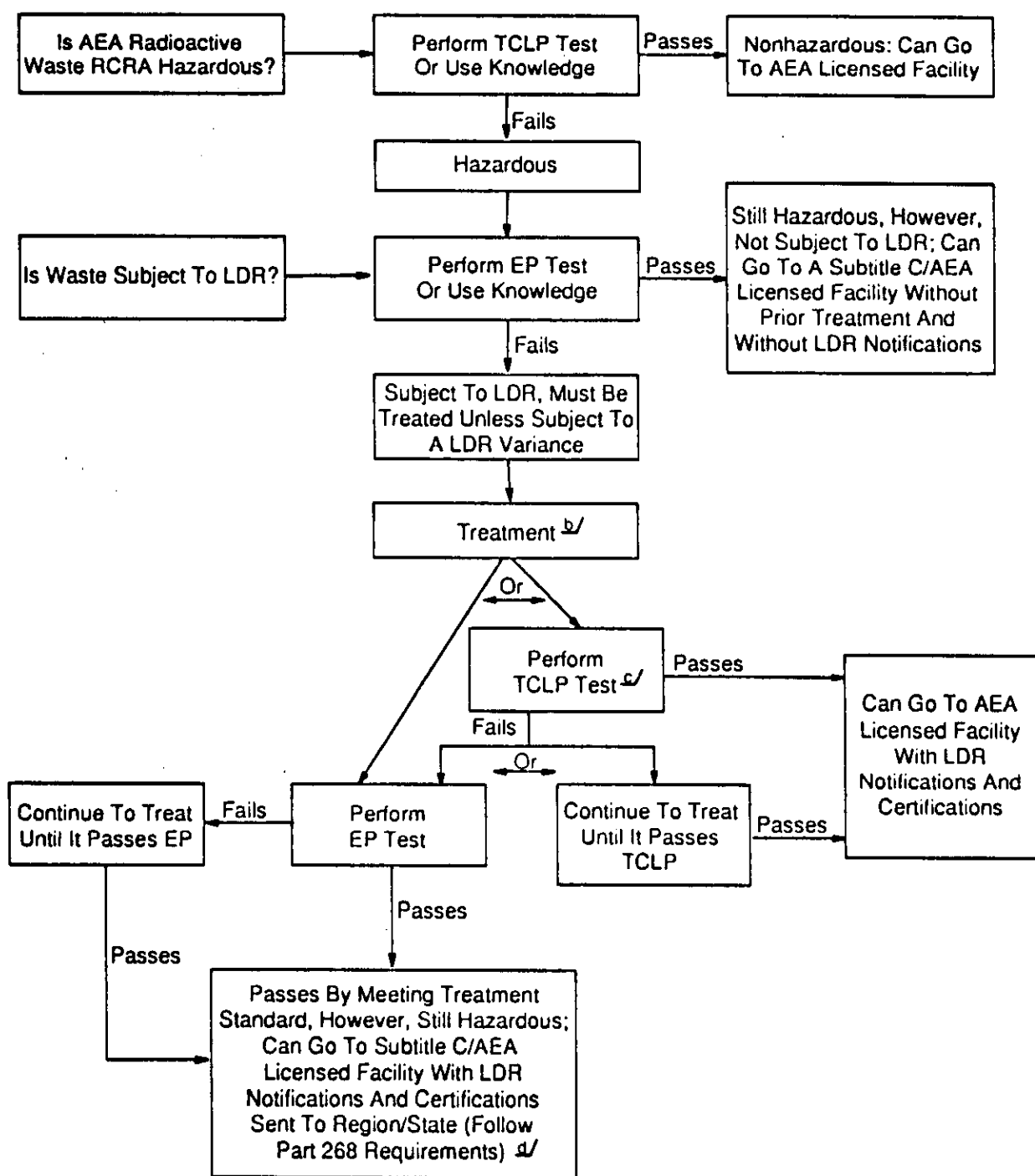
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Disclaimer

Section V, "Determinations under the Land Disposal Restrictions (LDRs)" and the following flow charts are a brief summary of the Land Disposal Restriction Regulations. They are not meant to be a complete or detailed description of all applicable LDR regulations. For more information concerning the specific requirements, consult the Federal Registers cited in the document and the Code of Federal Regulations, Title 40 Parts 124, and 260 through 271.

9313093.1662

FIGURE ONE: TESTING REQUIREMENTS
FOR CHARACTERISTIC LEAD AND ARSENIC NONWASTEWATERS ONLY^{a/}



^{a/} Logic tree assumes the waste also contains AEA regulated radioactive waste.

^{b/} If the treatment standard is expressed as a specified technology, no further testing is required. However, the mixed waste must go to a Subtitle C/AEA licensed facility with LDR notifications and certifications.

^{c/} TCLP generally yields higher concentrations than EP for lead and arsenic in certain matrices.

^{d/} If the waste meets the treatment standard and passes the TCLP, it can go to an AEA licensed facility with LDR notifications and certifications.

FIGURE TWO: TESTING REQUIREMENTS
FOR ALL OTHER CHARACTERISTIC METALS AND PESTICIDE WASTES ^{a/}

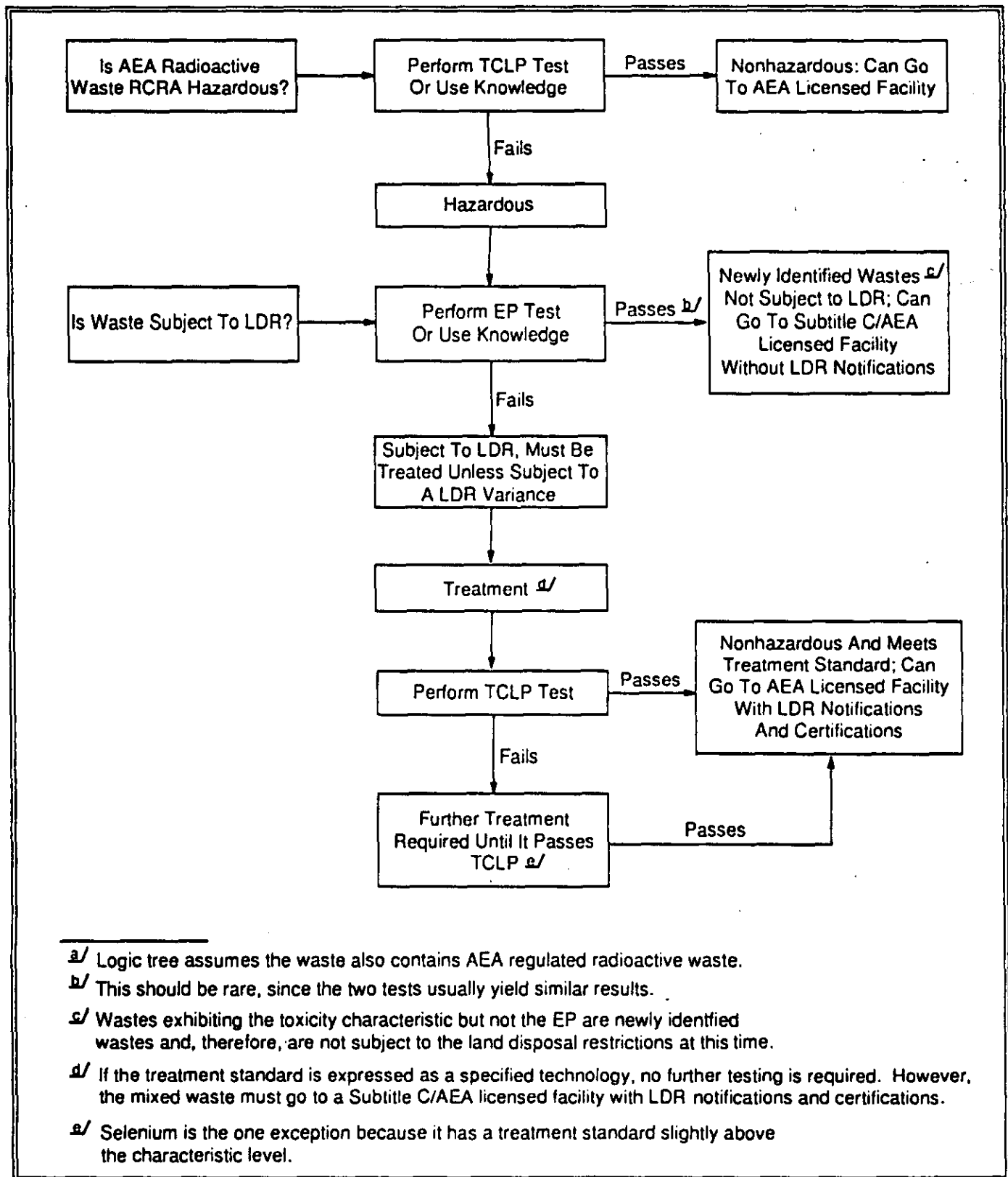
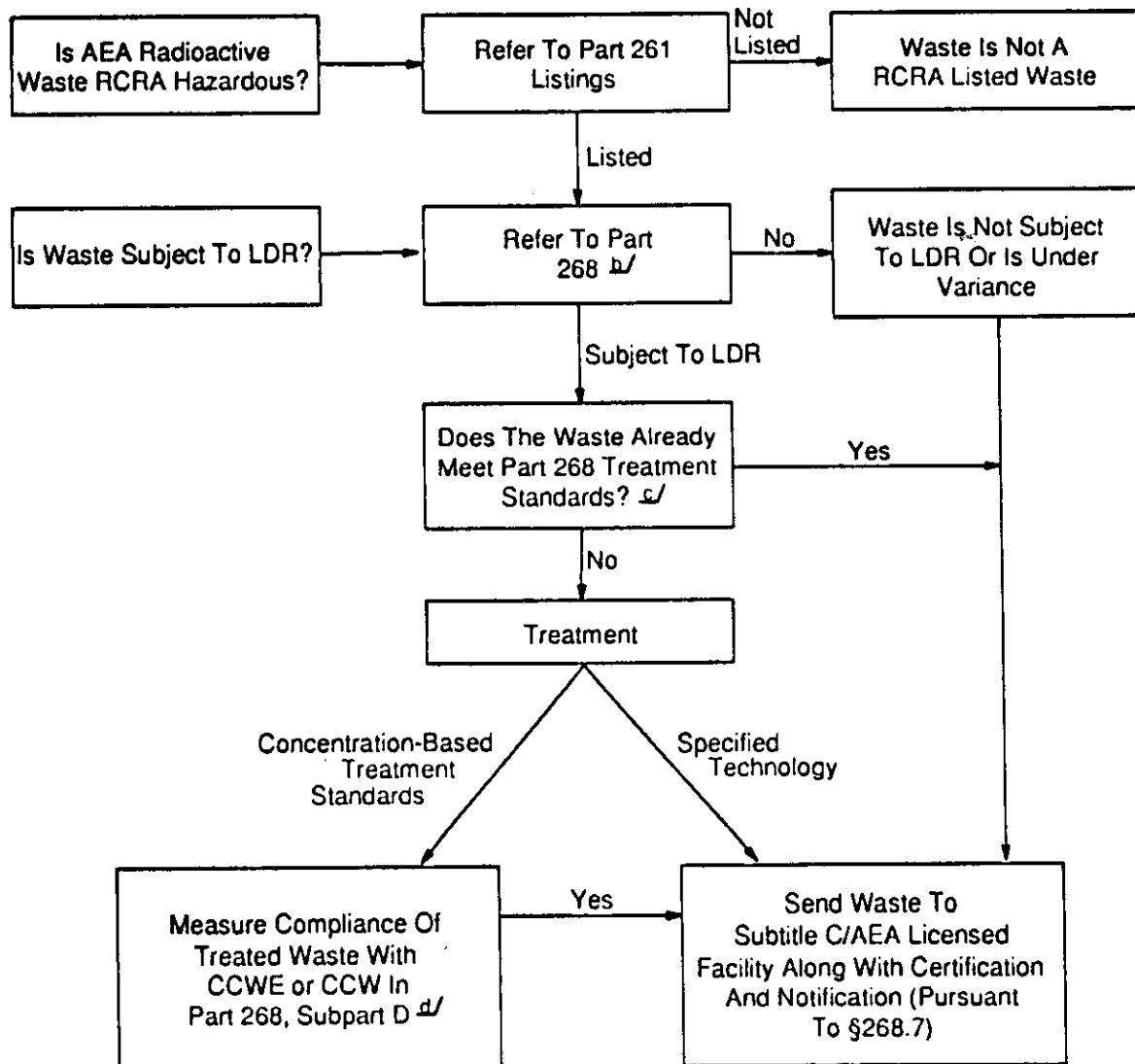


FIGURE THREE: TESTING REQUIREMENTS
FOR RCRA LISTED HAZARDOUS WASTES ONLY ^{a/}



^{a/} Logic tree assumes the waste also contains AEA regulated radioactive waste.

^{b/} Refer to §268.1 to determine if LDR is applicable to waste.
If so, test using TCLP or use process knowledge to determine if waste is restricted (§268.7).

^{c/} Test using TCLP or use process knowledge.

^{d/} The Constituent Concentrations in Waste Extract (CCWE) are treatment standards for the extract or treatment residual using the TCLP. The Constituent Concentrations in Wastes (CCW) are treatment standards for the waste or treatment residual using any standard chemical protocol (See SW-846).

As of January 31, 1992

STATES WITH MIXED WASTE AUTHORIZATION

<u>State/ Territory</u>	<u>FR Date</u>	<u>Effective Date</u>	<u>FR Cite</u>
Colorado	10/24/86	11/7/86	51 <u>FR</u> 37729
Tennessee	6/12/87	8/11/87	52 <u>FR</u> 22443
S. Carolina	7/15/87	9/13/87	52 <u>FR</u> 26476
Washington	9/22/87	11/23/87	52 <u>FR</u> 35556
Georgia	7/28/88	9/26/88	53 <u>FR</u> 28383
Nebraska	10/4/88	12/3/88	53 <u>FR</u> 38950
Kentucky	10/20/88	12/19/88	53 <u>FR</u> 41164
Utah	2/21/89	3/7/89	54 <u>FR</u> 7417
Minnesota	4/24/89	6/23/89	54 <u>FR</u> 16361
Ohio	6/28/89	6/30/89	54 <u>FR</u> 27170
Guam	8/11/89	10/10/89	54 <u>FR</u> 32973
N. Carolina	9/22/89	11/21/89	54 <u>FR</u> 38993
Michigan	11/24/89	12/26/89	54 <u>FR</u> 48608
Texas	3/1/90	3/15/90	55 <u>FR</u> 7318
New York	3/6/90	5/7/90	55 <u>FR</u> 7896
Idaho	3/26/90	4/9/90	55 <u>FR</u> 11015
Illinois	3/1/90	4/30/90	55 <u>FR</u> 7320
Arkansas	3/27/90	5/29/90	55 <u>FR</u> 11192
Oregon	3/30/90	5/29/90	55 <u>FR</u> 11909
Kansas	4/24/90	6/25/90	55 <u>FR</u> 17273
North Dakota	6/25/90	8/24/90	55 <u>FR</u> 25836
New Mexico	7/11/90	7/25/90	55 <u>FR</u> 28397
Oklahoma	9/26/90	11/27/90	55 <u>FR</u> 39274

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Connecticut	12/17/90	12/31/90	55 <u>FR</u> 51707
Florida	12/14/90	2/12/91	55 <u>FR</u> 51416
Mississippi	3/29/91	5/28/91	56 <u>FR</u> 13079
South Dakota	4/17/91	6/17/91	56 <u>FR</u> 15503
Indiana	7/30/91	9/30/91	56 <u>FR</u> 41959
Louisiana	8/26/91	10/26/91	56 <u>FR</u> 41959

93130135

References

EPA, Office of Solid Waste and Emergency Response. "Joint EPA/NRC Guidance on the Definition and Identification of Commercial Mixed Low-Level Radioactive and Hazardous Waste," Directive No. 9432-00-2, October 4, 1989

EPA, Office of Solid Waste and Emergency Response. "Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods," 2nd Ed., SW-846, 1986.

Regulations

Environmental Protection Agency General Regulations for Hazardous Waste Management, 40 CFR Part 260.

Environmental Protection Agency Regulations for Identifying Hazardous Waste, 40 CFR Part 261.

Environmental Protection Agency Regulations for Hazardous Waste Generators, 40 CFR Part 262.

Environmental Protection Agency Standards for Owners and Operators of Hazardous Waste Treatment, Storage and Disposal Facilities, 40 CFR Part 264.

Environmental Protection Agency Interim Status Standards for Owners and Operators of Hazardous Waste Facilities, 40 CFR Part 265.

Environmental Protection Agency Regulations on Land Disposal Restrictions, 40 CFR Part 268.

Nuclear Regulatory Commission Regulations - Standards for Protection Against Radiation, 10 CFR Part 20.

Nuclear Regulatory Commission Regulations - Rules of General Applicability to Domestic Licensing of Byproduct Material, 10 CFR Part 30.

Nuclear Regulatory Commission Regulation - Domestic Licensing of Source Material, 10 CFR Part 40.

Nuclear Regulatory Commission Regulations - Domestic Licensing of Production and Utilization Facilities, 10 CFR Part 50.

Nuclear Regulatory Commission Regulations - Licensing Requirements for Land Disposal of Radioactive Waste, 10 CFR Part 61.

Nuclear Regulatory Commission Regulations - Domestic Licensing of
Special Nuclear Material, 10 CFR Part 70.

9313043.169

is safe and effective for medical use. To quote Doctor Kenneth P. Johnson, Chairman of the Department of Neurology at the University of Maryland, and the author of over 100 scientific and medical articles on MS: "To conclude that marijuana is therapeutically effective without conducting rigorous testing would be professionally irresponsible."

By any modern scientific standard, marijuana is no medicine.

Under the authority vested in the Attorney General by section 201(a) of the Controlled Substances Act, 21 U.S.C. 811(a), and delegated to the Administrator of the Drug Enforcement Administration by regulations of the Department of Justice, 28 CFR 0.100(b), the Administrator hereby orders that marijuana remain in Schedule I as listed in 21 CFR 1300.11(d)(14).

Dated: March 16, 1992.

Robert C. Bonner,

Administrator,

(FR Doc. 92-0714 Filed 3-25-92; 8:45 am)

BILLING CODE 4410-09-M

NUCLEAR REGULATORY COMMISSION

ENVIRONMENTAL PROTECTION AGENCY

Proposed Guidance Document on the Testing of Mixed Radioactive and Hazardous Waste

AGENCY: Nuclear Regulatory Commission, Environmental Protection Agency.

ACTION: Notice of availability and request for public comment.

SUMMARY: The Nuclear Regulatory Commission (NRC) and the Environmental Protection Agency (EPA) are jointly issuing a proposed guidance document on the testing of mixed radioactive and hazardous waste (mixed waste). This guidance document was developed to assist mixed waste generators in identifying and performing the testing required under the Federal regulations that implement the Resource Conservation and Recovery Act Subtitle C hazardous waste program and to ensure that employee radiation exposures are maintained as low as Reasonably Achievable (ALARA). The agencies are soliciting comments from interested members of the regulated community, the States, and the public. Interested individuals may provide the agencies with their comments on the proposed guidance document by forwarding their written comments to the NRC at the address listed in the "ADDRESSES" section. Interested parties

may also participate in a public meeting being held to solicit oral comments on the proposed guidance document. Interested individuals will be given an opportunity to speak for fifteen minutes at this meeting. This time allowance may be extended, on request for good cause, if the schedule of speakers permits this extension.

DATES: The agencies will accept written comments until May 28, 1992.

Individuals submitting comments after this date cannot be assured that the agencies will be able to afford their comments full consideration in any revisions that may be made to the proposed guidance document.

The public meeting to solicit oral comments on the proposed guidance document will be held on April 14, 1992, from 8:30 a.m. until 4:30 p.m. at the Mayflower/Stouffer Hotel, New York Room 1127 Connecticut Avenue NW., Washington, DC 20036, telephone (202) 347-3000.

ADDRESSES: Copies of the proposed guidance document may be obtained by contacting Dominick A. Orlando, NRC Mixed Waste Project Manager, Division of Low-Level Waste Management and Decommissioning, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555, telephone (301) 504-2566.

Written comments on the proposed guidance document should be directed to David L. Meyer, Chief, Regulatory Publications Branch, Division of Freedom of Information and Publications Service, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, DC 20555 or hand delivered to the Commission's offices at 7920 Norfolk Avenue, Bethesda, MD between the hours of 7:45 a.m. and 4:14 p.m. on Federal workdays.

Requests to speak at the public meeting should be submitted, in writing, to EPA. The written request should be addressed to Reid Roanick, Mixed Waste Coordinator, Permits and State Programs Branch, Office of Solid Waste (OS-342), U.S. Environmental Protection Agency, 401 M Street SW., Washington, DC 20460. Interested speakers should include in the written request a statement identifying the topics to be addressed in their presentations, the names and affiliations of the individual(s) that will speak, and the amount of time the speaker(s) will require. A transcript of the oral proceedings will be included in the record for this action.

FOR FURTHER INFORMATION CONTACT: Dominick A. Orlando, Mixed Waste Project Manager, Division of Low-Level

Waste Management and Decommissioning, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555, telephone (301) 504-2566 or Reid Roanick, Mixed Waste Coordinator, Permits and State Programs Division, Office of Solid Waste, U.S. Environmental Protection Agency, 401 M Street SW., Washington, DC 20460, telephone (202) 260-4755.

Dated at Rockville, MD this 19th day of March, 1992.

For the U.S. Nuclear Regulatory Commission,

Robert M. Betman,

Director, Office of Nuclear Material Safety and Safeguards.

For the U.S. Environmental Protection Agency,

Sylvia K. Lowrance,

Director, Office of Solid Waste.

(FR Doc. 92-7031 Filed 3-25-92; 8:45 am)

BILLING CODE 7030-01-M

OFFICE OF MANAGEMENT AND BUDGET

Circular No. A-76: Performance of Commercial Activities; Amendment

AGENCY: Office of Management and Budget.

ACTION: Issuance of Transmittal Memorandum No. 11, amending OMB Circular No. A-76, "Performance of Commercial Activities."

SUMMARY: This notice contains Transmittal No. 11, dated February 1992, to OMB Circular No. A-76, "Performance of Commercial Activities."

This Transmittal Memorandum updates the Federal pay raise assumptions and inflation factors used for computing the Government's in-house personnel and non-pay cost increases for Fiscal Years 1992 through 1997. The Federal pay raise assumptions and the non-pay category rates are contained in the President's Budget for Fiscal Year 1993. The factors contained in OMB Circular No. A-76, Transmittal Memorandum No. 10, dated February 28, 1991, are outdated.

The revision does not require any agency to (1) create or maintain a duplicate control/monitoring/reporting system or (2) adopt any additional controls, not presently in compliance with Federal Acquisition Regulations (FAR).

FOR FURTHER INFORMATION CONTACT: Mr. David Childs, Federal Services Branch, General Management Division,

0291 3406135

Attachment 7

**GROUT TREATMENT FACILITY
Unit Managers Meeting
Ecology Office, Kennewick, Washington**

**February 18, 1993
9:00 a.m. - 10:00 a.m.**

**GROUT FACILITIES MILESTONE M-01-00
COMPLETE 14 DOUBLE-SHELL TANK GROUT CAMPAIGNS**

930313.1671

Grout Facilities Milestone M-01-00
Complete 14 Double-Shell Tank Grout Campaigns

presented to
**State of Washington Department of Ecology and
U.S. Environmental Protection Agency**

George Sanders, Acting Director Disposal Division
Lori Huffman, RL Low-Level Waste Branch
Joe Epstein, WHC Level 3 Manager

February 17, 1993

2-18-93
6:20 PM 2002

GROUT FACILITIES

3509 373 3633

10:10

02/18/93

Milestone Description

M-01-00

Complete 14 grout campaigns of double-shell tank (DST) waste by December 1996 and maintain currency with feed thereafter.

Baseline Schedule

Complete 14 campaigns by December 1996.

Note: TPA change request was denied by Ecology and EPA on October 30, 1992. RL responded with letter to Ecology and EPA on November 6, 1992, invoking dispute resolution under the TPA.

Open Commitments

- Action:** Provide a copy of the draft grout C-2 analysis to the State in parallel with DOE review.
- Responsibility:** G. Sanders
- Status:** Document is being reworked to incorporate RL comments, new population dose calculations, and facility modifications. Resubmittal planned to RL mid February.

Planned Activities

- Continue development of operating, maintenance, and administrative procedures
- Continue facility modifications and critical facility maintenance activities
- Continue analysis on GTF production capacity study
- Continue Compliance Assessment portion of Operational Readiness Review
- Submit DST vault closure implementation plan to RL February 1993
- Submit Performance Assessment to RL May 1993
- Complete Pilot Plant 106-AN test results February 1993
- Complete PSW core analysis March 1993
- Accept delivery on vault 102 and 103 Ventilation Systems March 1993
- Complete Hot Pilot Plant Engineering Study March 1993

Accomplishments

- **FSAR resubmitted to RL** **January 1993**
- **Accepted vaults 102-105 from contractor** **December 1992**
- **Completed DST waste transfer of 106-AN to feed tank 102-AP** **December 1992**
- **Submitted final Grout Issue Paper to DOE-HQ** **December 1992**
- **Initiated initial grout clearing for vaults 106-109 (M-01-02A)** **November 1992**

9313043.1677

Milestone Assessment

	<u>Schedule</u>	<u>TPA Baseline</u>	<u>Status</u>
• M-01-01A	Complete and verify 2 campaigns (101, 102).	9/93	Under evaluation
• M-01-01B	Complete 1 additional campaign (103).	12/93	Under evaluation
• M-01-02	Complete 3 additional DST campaigns in 1994 (104, 105, 106).	12/94	Under evaluation
• M-01-02A	Initiate construction of vaults 106-109.	11/92	Complete ¹
• M-01-03	Complete 4 additional DST campaigns in 1995 (107-110).	12/95	Under evaluation
• M-01-03A	Initiate construction of vaults 110-113.	11/93	Under evaluation
• M-01-04/00	Complete 4 additional campaigns in 1996 (111-114).	12/96	Under evaluation
• M-01-04A	Initiate construction of vault 114.	11/94	under evaluation

Achievement of these milestones is not considered possible. Furthermore, we anticipate a several month delay in the 10/93 targeted facility restart due to Performance Assessment and facility preparation delays.

¹ Suspension of further excavation/construction work on vault 106-109 has been deferred with Ecology concurrence.

Milestone Assessment (cont.)

- Cost versus Budget

(Dollars in Millions)

Cumulative	Oct-Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept
FYTD Budget	11.9	15.3	18.8	22.3	26.0	29.0	31.7	35.0	37.9
FYTD Cost	10.2								
Spending Variance	1.7								

Variance Explanation:

Attributable to resource constraints in the areas of facility readiness activities (procedures, facility upgrades, compliance assessment).

Special Topics

Key Issues

- **Critical path schedule compared to current TPA milestones and pending dispute resolution.**
 - **Additional schedule impacts occurring: PA, procedure development, facility upgrades, and facility readiness activities, vault 103 feed, 104-AP upgrades (reprogramming), hot pilot requirement**
- **Ecology's concerns on hydrogen generation.**
 - **FSAR update planned (mitigation equipment) and an informational copy will be provided to Ecology subsequent to HQ review and approval. Planned for mid 1993.**
 - **Confirming analysis of the H₂ generation.**

Special Topics (cont.)

- **NRC ruling on petitions of States of Washington and Oregon with respect to high-level waste definition.**
- **Technical Issues**
 - **PA will be submitted to RL in May 1993**
 - **DST 101-AW, originally intended Vault 103 feed is now a watch list tank. DST 105-AP will be utilized as vault 103 feed.**
 - **Heat of Hydration data will be finalized in February 1993 to support the development of Vault 102 campaign plan.**

Change Notice Activity

- **Change request M-01-92-01A has been denied by Regulators.**
- **Dispute resolution invoked by RL.**

Distribution:

J. H. Anttonen	RL	R3-73
B. A. Austin	WHC	B2-35
J. K. Bartz	MACTEC	A4-35
E. J. Bitten	WHC	L4-73
R. C. Bowman	WHC	H6-24
R. C. Brunke	WHC	H6-23
R. M. Carosino	RL	A4-52
G. D. Carpenter	WHC	H6-30
R. Carreon	RL	R3-74
M. S. Cochrane	WHC	S1-52
R. E. Cordts	Ecology	
C. E. Clark	RL	A5-15
M. W. Cline	WHC	H6-24
L. P. Diediker	WHC	T1-30
C. K. Disibio	WHC	B3-15
D. L. Duncan	EPA	HW-106
C. J. Geier	WHC	H6-21
W. T. Gretsinger	WHC	R4-01
L. A. Huffman	RL	R3-74
M. Jaraysi	Ecology	
P. J. Mackey	WHC	B3-15
K. S. McCullough	WHC	H4-70
R. J. Murkowski	WHC	R4-02
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J. E. Van Beek	WHC	R3-27
J. A. Voogd	WHC	H5-49
R. F. Wood	WHC	R4-01
G. D. Wright	WHC	R3-10

ADMINISTRATIVE RECORD: Grout Treatment Facility, TD-2-1
[Care of EPIC, WHC (H6-08)]

Washington State Department of Ecology Nuclear and Mixed Waste Library,
P.O. Box 47600, Olympia, Washington 98504-7600

Environmental Protection Agency Region 10, Seattle, Washington 98101, Mail
Stop HW-106

Please send comments on distribution list to Kathy Knox, WHC (H6-24),
(509) 372-3596.

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